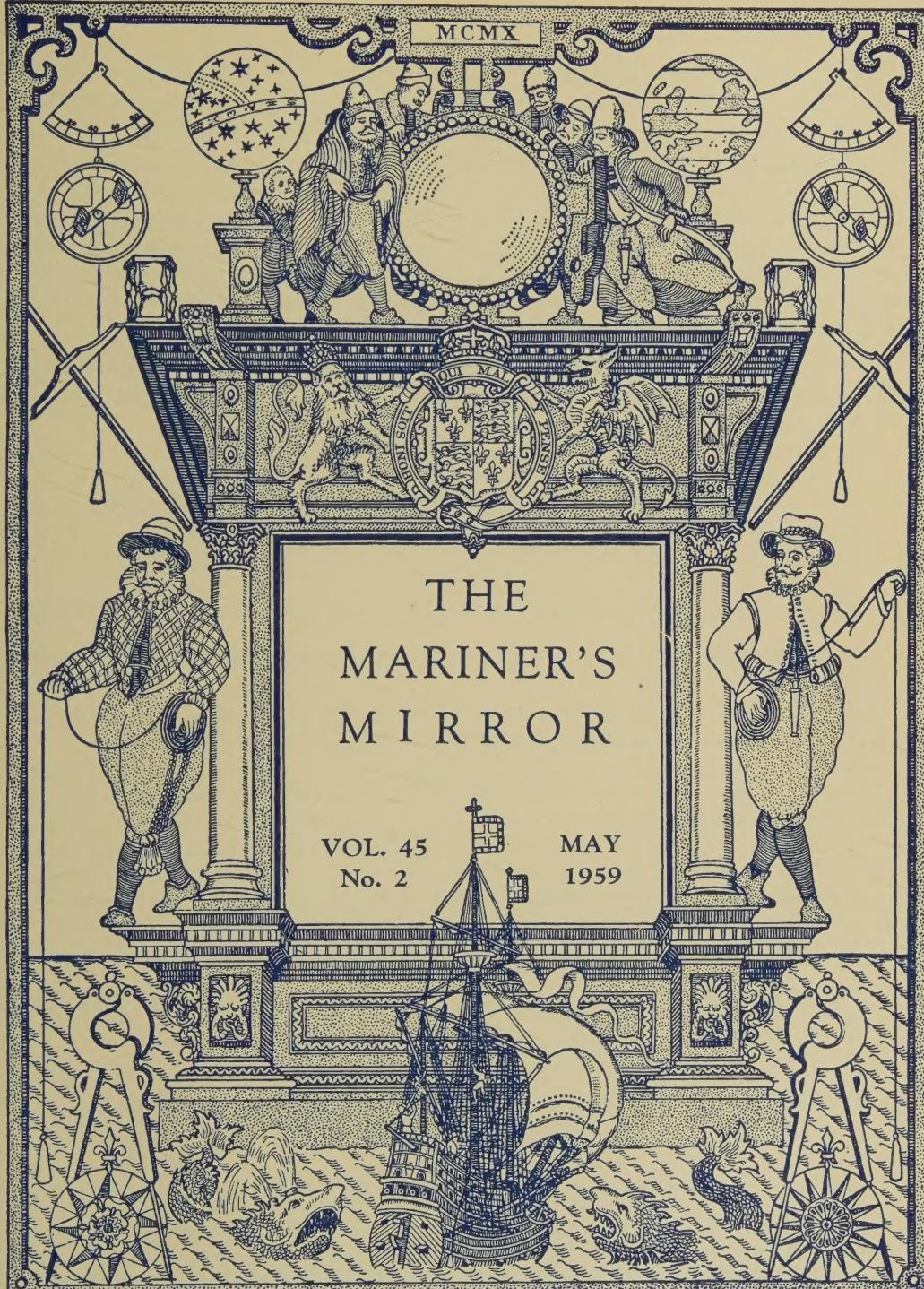


THE QUARTERLY JOURNAL of the SOCIETY FOR NAUTICAL RESEARCH



R.T. Gould del.

Ioannes a Doetecum inv. circa 1583

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# THE SOCIETY FOR NAUTICAL RESEARCH

FOUNDED 1910

To encourage research into nautical antiquities, into matters relating to seafaring and shipbuilding in all ages and among all nations, into the language and customs of the sea, and into other subjects of nautical interest.

The Society has erected a Monument to the Van de Veldes in St James's, Piccadilly, London; raised £107,000 to save Nelson's Flagship and has superintended the restoration of H.M.S. *Victory* to her appearance as at the Battle of Trafalgar; paved the way to the establishment of the National Maritime Museum at Greenwich and the *Victory* Museum at Portsmouth; organized exhibitions of Nelson relics and naval prints, etc.; and issued a number of periodical publications dealing with nautical archaeology, besides an inexpensive set of official plans (ten in number) for building a model of H.M.S. *Victory*.

The annual subscription of 30 shillings (\$4.30) entitles a member to receive *The Mariner's Mirror* and the Annual Report and to attend the Annual Meetings and the Annual Lectures.

*For particulars of membership apply to*

THE HON. SECRETARY, SOCIETY FOR NAUTICAL RESEARCH,  
NATIONAL MARITIME MUSEUM, GREENWICH, S.E. 10

## CONTRIBUTIONS TO THE MARINER'S MIRROR

The aim of the Society being to arrive at true conclusions through free discussion, it is distinctly to be understood that the Editor is not held responsible for statements made in the *Journal*.

Contributions and correspondence should be addressed to G. R. G. WORCESTER, Esq., *Penny Cottage, Pound Lane, Windlesham, Surrey*. All articles, notes, queries, answers and reviews of books should be typed, on one side of the paper, preferably quarto, with double-spacing and with a wide margin. The name and address of the author must be given on the last page. As a general rule, the length of an article should not exceed 10,000 words and, owing to the high costs of production, photographs and line drawings to illustrate contributions must be restricted to a minimum.

Names of ships should be underlined to denote *italics*, and not written within inverted commas.

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NEW YORK: *Cambridge University Press, American Branch, 32 EAST 57TH STREET, 22;*  
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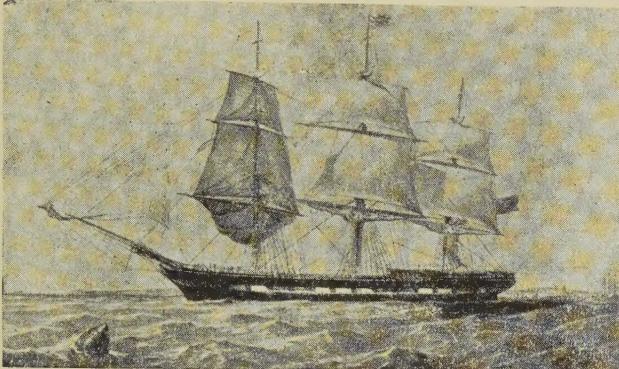
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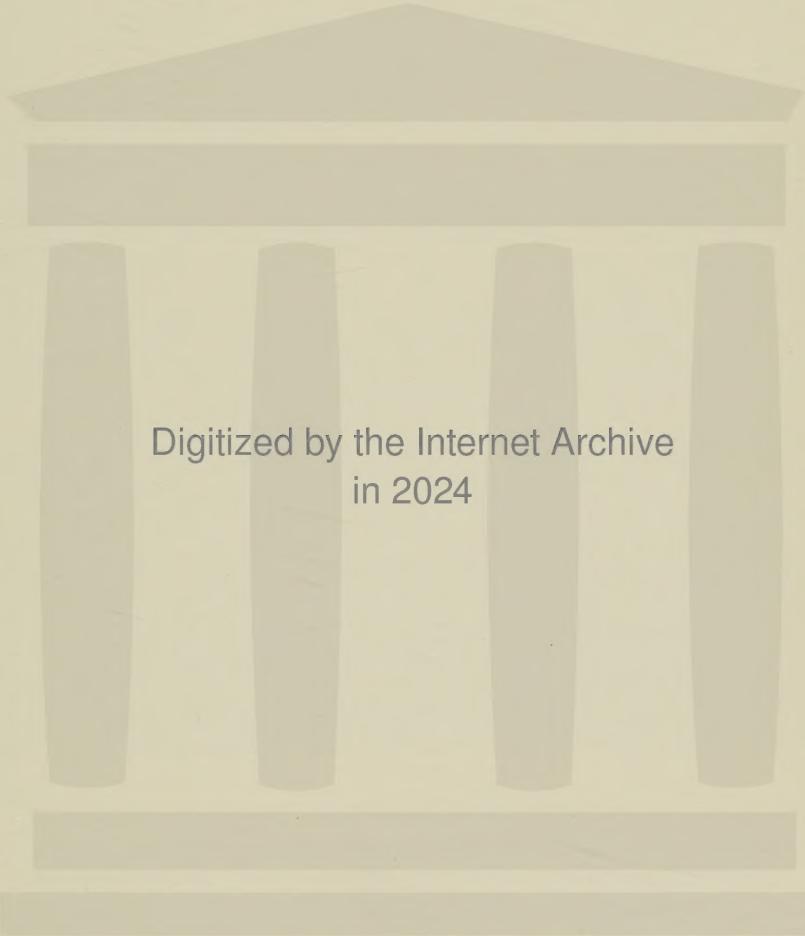
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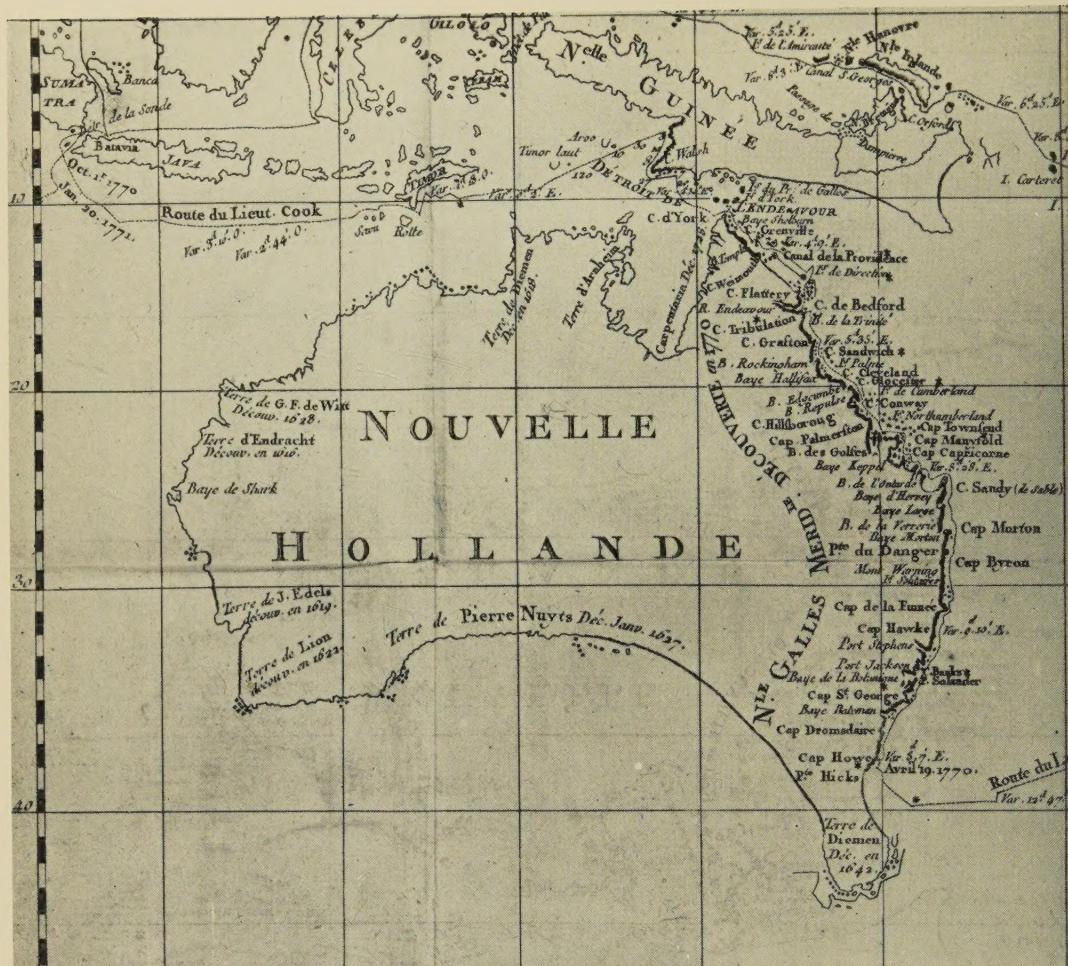
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## NOUVELLE HOLLANDE (see p. 115).

From the French edition of Hawkesmith's *Voyages*, 1774, showing Cook's track in 1770 and the south coast of the continent as then laid down by the cartographers.

(Frontispiece)

# *The MARINER'S MIRROR*

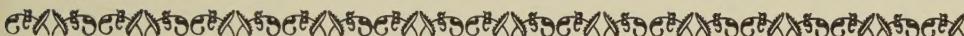
WHEREIN MAY BE DISCOVERED HIS  
ART, CRAFT & MYSTERY

*after the manner of their  
use in all ages and  
among all  
Nations*



VOL. 45. No. 2

1959



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## OBITUARY

We record with regret the death of Sir Frederick Maze, K.B.E., K.C.M.G., at the age of 87. ‘Freddy’, as he was known to everyone in the Service—behind his back, served for 51 years in the Chinese maritime Customs, during the last fourteen as Inspector General. His affability and unruffled calm admirably equipped him to stand at the head of Chinese Customs affairs during the trying period from 1937–1941, when half the Treaty Ports were under Japanese occupation, and he had to serve two mutually hostile masters as best he could. Honours were showered on him by many nations; but to me his chief claim to fame will always be that he was probably the first person to realize that the study of Chinese Junks was a fascinating occupation for the seaman, ship-lover and artist alike. The Chinese Junk was indeed his life’s hobby; although to my certain knowledge he had never been on board one, he had yet an unrivalled knowledge of most of the basic types of sea-going junks and especially of their complicated rigging and symbolic decoration. In 1937 he projected a scheme for systematic Chinese nautical research, under the aegis of the Customs, which was to cover the whole of China. Unfortunately World War II prevented more being completed than an examination of the craft of the Yangtze Valley. He attempted, with some success, to interest the general public in Chinese shipping; the outcome of this was the MAZE COLLECTION at the Science Museum. This unique exhibit is (with the exception of the ‘Five-masted Sea-Going Shantung Junk’) accurate in detail and will, it is hoped, always form a lasting memorial to the donor.

G. R. G. WORCESTER

The death of Captain Henry Theodore Augustus Bosanquet, C.V.O., Royal Navy, at the age of 88, will have been noted with deep regret by very many members and friends. He joined the *Britannia* in 1883 and his name first appears in the Navy List on his appointment to H.M.S. *Raleigh* in 1885. The *Raleigh*, a fully rigged steam frigate, her iron hull cased with wood, has been described in vol. xxii of the *Journal*. In 1885 she was the flagship on the Cape of Good Hope and West Coast of Africa Station. His service career can be followed in his own annotated collection of press cuttings, presented to the museum a short time ago. He used to recall with pleasure his experiences surveying the Great Barrier Reef in the gun-boat *Paluma*. On one occasion in 1893 a flood on the Brisbane River deposited the *Paluma* and other vessels high and dry on shore in the Botanical Gardens, out of which when the flood waters returned she was hauled with some difficulty. Captain Bosanquet served in the Training Squadron and in other Training Ships, and when he retired through ill health as a Lieutenant in 1898 at the age of 27 he joined the Marine Society. In 1897 he published anonymously a useful short account of 'The Royal Navy', described as 'a capital shilling's worth' in *The Army and Navy Gazette*. He was promoted a captain on the retired list as a reward for his work mostly at the Admiralty in the First World War, when for a time he was head of the navigation section of the Royal Naval Air Service. He returned to the Admiralty again on the outbreak of the Second World War. His services to the Society for Nautical Research are remarkable. He was a foundation member and his name appears on the back cover of the very first number of the *Mariner's Mirror*, vol. 1, no. 1, 1911 as one of the honorary auditors, and has appeared there ever since, in some capacity, until vol. 45, no. 1, 1959. He was an Auditor until 1946, Treasurer in 1947, Councillor in 1948 and a Vice-President in 1951. A very memorable innings. In early numbers of the *Journal* he contributed articles about naval education, as befitted the Secretary of the Marine Society. In later numbers his valuable series of articles and notes are of a more varied character. He was a well known and welcome visitor to the National Maritime Museum and published a catalogue of its collection of naval officers' swords in 1955, which was reviewed in the *Journal* for August 1957. Captain Bosanquet will be remembered by his many friends as always accessible and ready with kindly advice, criticisms and information. He was a great friend to this Society which he helped to establish and which he continued loyally to serve and honour. In 1957 the Society showed its appreciation of his devoted, unbroken and unstinted services by making him an Honorary Vice-President.

G. P. B. NAISH

## THE SOCIETY'S ANNUAL LECTURE

**T**HE annual lecture for 1958 was delivered in the lecture room of the National Maritime Museum, by permission of the Director, on 23 April, when Mr Basil Greenhill, Deputy High Commissioner for the United Kingdom in East Pakistan, talked on 'The Boats of Pakistan', and illustrated his theme with lantern slides, some of which were in colour.

The lecturer, who is well known to many members of the Society, was introduced by the President, Dr R. C. Anderson; and afterwards the Society entertained its guests to tea in the Museum Restaurant.

After tea Mr Greenhill showed a short ciné film of the fishermen and fishing boats at Karachi.

The lecturer began by explaining that after British India was partitioned in 1947 into two new independent states, India and Pakistan, the greater part of the total length of the Indus and parts of its tributary streams lay in West Pakistan. The junction of the Ganges and the Brahmaputra, two of the world's greater rivers, lay in the province of East Pakistan, together with a considerable part of their labyrinthine common delta.

The lecturer showed a map which made clear how vast these rivers are and how important they must be to the life of the country through which they run. He pointed out that West Pakistan is a long, rather narrow province, stretching from the Himalayas to the sea, through which the Indus runs like a back bone. East Pakistan, on the other hand, was more or less square in shape and most of its area was covered with a complicated network of rivers, streams and lakes.

Karachi, the capital of Pakistan, stands at the northern side of the Indus delta. It was originally a fishing village and it still has a sizeable and growing fleet of fishing boats, almost all sailing vessels. A census taken in 1953 showed over a thousand of them, about half of which were large sea-going boats.

Mr Greenhill pointed out that the Karachi fishing boats could be divided into two distinctive groups, the Hora group and the Bheddi group. He described and illustrated these two groups of boats (an account of which was published in the *Mariner's Mirror*, Vol. 42, no. 1), and the life of the fishermen; and went on to say that the Food and Agriculture Organization of the United Nations had recently conducted an investigation at the request of the Government of Pakistan, which was probably the first thorough professional examination of the design of a group it was once the fashion to call 'primitive craft', which has ever been made. It showed that these fishing boats, and in particular the bheddies, were rather outstanding vessels. Tank tests had shown them to be generally better than a whole series of typical European powered fishing boats designed without tank tests.

The lecturer then suggested a journey up the Indus to look at the boats of that river itself. The most common Indus boat is a flat-bottomed punt, the ends of which have been bent upwards to give her a most graceful sheer. The silhouette of these boats is perhaps not unlike that depicted in one of the two famous scribings of boats found at Moenjo Daro, which lies in the centre of the long stretch of the Indus on which boats of this kind are to be found to-day. It could be argued that the little clay models of carts found at Moenjo Daro are just like the small bullock carts used in the same area to-day; even the wheels are of the same unusual pattern and if the carts have survived why not also the boats?

The lecturer said that, for a number of reasons, he did not wish to press this idea, but it was interesting because of the great difference in constructional detail between the modern Indus boats and other boats bearing a general resemblance to them in silhouette, such as the boats of East Pakistan. They were built by setting up the floor planking first of all, joining the planks together edge to edge with hard wooden pins driven into holes drilled diagonally through the seam from the outer side of one plank into the inner side of the other. After the floor planks have been joined together straight floor timbers are nailed across them and, weighted down amidships with stones, they are forced up at the ends with levers. The side planks, which have been made up separately in the same way, are then joined on and the side and end decks fastened. The result

is a type of boat eminently suited to work on the river, light and easily moved, stable, shallow, yet capable of carrying a considerable load.

The lecturer then went on to describe the two other types of bigger cargo-carrying boats in use on the Indus to-day. One, the largest kind, was of almost uniform beam throughout her length, a hard chined boat, the flat bottom of which was literally rolled up at either end to form bow and stern. She was built in just the same way as the punts already described, the planks' edges joined and the sides and floors prefabricated.

It was perhaps of interest that in the Uffizi Gallery in Florence there is an Italian altar panel of the fifteenth century which shows the stern of a large sea-going vessel of the period, the general shape and construction of which would appear to be remarkably similar to that of this second type of boat in use on the river Indus to-day.

The third main kind of Indus boat which, with its variants, was in use right up into Afghanistan, was built in quite a different way, rather in the way in which a hard chined dinghy is built.

The lecturer showed a series of pictures, showing how these boats are handled on the rivers and how their crews live. They are usually rowed with great sweeps, eight inches or a foot thick at the loom, or sailed with a latine sail or sometimes under a square sail. Mr Greenhill then gave a brief but amusing illustrated account of the rafts made of a framework of light timber supported by inflated bullock skins which are used on the shallow rocky rivers of the foot-hills of Central Asia, in the extreme north of West Pakistan.

From the foot-hills of the High Pamir to the alluvial plains of East Pakistan is nearly 2000 miles, and the change of scenery is complete, because East Pakistan is hot, green, wet and mostly flat. It is a beautiful tropical country of vivid colours and majestic cloud scapes which are reflected in the waters of the great rivers. It is a land of waters. In the middle of the province the Ganges and the Brahmaputra join and then, in turn, are joined by the Meghna. The resultant stream is seventeen miles wide, seventy miles from the open sea.

Mr Greenhill described and illustrated the boats of this province (a detailed account of which was given in the *Mariner's Mirror*, Vol. 43, nos. 2 and 3), and the life of the boat builders and boatmen of East Pakistan, which is one of the richest areas in the world, outside China, for the study of what Sir Alan Moore once called 'comparative nautical anatomy'.

The lecturer concluded by saying that he might be expected to try to come to some conclusions, and base some theories on the mass of evidence about the different ways in which people have tackled the problem of boat building, which even the slight examination he had made this afternoon of the boats of one Asian country revealed, but he said he did not want to do so, because he felt that, despite the great amount of work which had been done on this branch of nautical research in the last fifty years, there was still far too much to be done and far too much to be learned. Even a brief glance at the boats of Pakistan showed a lot of new things. Edge joining with inserted frames was perhaps more widespread than was generally thought to be the case. There was a whole series of clinker-built boats which appeared to have developed in this part of Asia, the evidence suggested quite independently of clinker development in northern Europe. The examination showed that superficial similarity of form can exist between boats of totally different construction, with all that this implies.

The lecturer ended with an appeal to people who had the opportunity to study existing boats, and their builders, and those who sail them, in different parts of this rapidly changing world. The collection of information in this way would, he said, increase our opportunity of understanding the history of man's relations of that most significant factor in his environment, navigable water. After all, there are few pleasanter ways of spending time than looking at boats, or sailing in them, or talking about them, which perhaps was why the audience had come to hear the lecture to-day!

## THE STORY OF THE WOOLWICH SHIP

*By R. C. Anderson*

**T**HIS is the story of a discovery, a heated argument, an incomplete enquiry and a conversion almost as drastic as St Paul's, though probably far less sudden.

In November 1912 it became known that excavation on the site of the electricity works at Woolwich had laid bare part of the remains of a large ship. Sir William White, the late Director of Naval Construction, visited the spot and decided that the vessel probably belonged to the middle of the eighteenth century. A little later representatives of the London County Council took measurements and photographs, but neither they nor the Woolwich Borough Council thought it necessary, in view of Sir William White's opinion, to take steps to preserve the remains or to investigate further. It was not until more than a year after the first discovery that any public interest was aroused; by which time much of the timber had been sawn up and sold.

On 3 December 1913 Mr Seymour Lucas, R.A., who had been responsible for the recent full-size reconstruction of Drake's *Golden Hind*, wrote to *The Morning Post* claiming that the ship was some 200 years older than had been supposed, and was in fact Henry VIII's biggest ship, the *Henry Grace à Dieu* or 'Great Harry', known (or believed) to have been destroyed by fire at Woolwich in 1553. A few days later the then owners of the timber put forward the alternative suggestion that it represented the remains of the *Pelican* (or *Golden Hind*), although it was almost certain that that ship had simply dropped to pieces at Deptford.

The Society for Nautical Research had at that time been in existence for three years and was perhaps a little over inclined to believe that real knowledge in the field of nautical archaeology was only to be found among its members; we certainly resented the uncritical manner in which Mr Seymour Lucas's claim was accepted simply on account of his standing as an artist.

My own share in the ensuing controversy was quite unimportant; I merely wrote one letter asking for more evidence and suggesting that our Society might be able to help in further investigation. Laughton was far more outspoken, both over his own signature and in his capacity as anonymous naval correspondent of *The Morning Post*. First he repeated my demand for evidence of the ship's sixteenth-century date and suggested that she

might well be one of those sunk to close the river against the Dutch in 1667. To this Seymour Lucas replied, saying that Laughton must be 'unacquainted with timber construction' and recommending a visit to the Naval Museum at Greenwich and a study of the models there! Laughton described this as lacking in courtesy and said that he 'preferred to regard it as symbolical of ignorance that Nautical Archaeology had become an organized study'. At this stage another correspondent took up Laughton's earlier complaint that no 'skilled antiquary' had watched the progress of the excavations and described himself as a 'patient observer' who had collected facts to be used by such an antiquary. This writer described the remains as 'resting in a dock' of late eighteenth-century construction and stated the problem thus: 'What sixteenth-century ship or ships were in existence at the end of the eighteenth century?'

All this was in the first half of December. Towards the end of January Laughton used a recent letter from Miss Marie Corelli as an excuse for a long article under his own name with the heading: 'The Henry Pelican at Woolwich', a title which I had myself invented, though I was not given the credit or blame for it. He described his earlier contribution to the discussion as the third occasion on which he 'had challenged Mr Lucas's authority on these matters', and went on to give his own views as to what the ship really was. He insisted that she could not be the *Henry Grace à Dieu* and that this could be proved by details of construction and in particular by the size and design of the remains of her mainmast, it being 52 inches in diameter as opposed to the '30 inches or a little more' to be expected in a ship of her size, 'a small ship by later standards'.

'What she is, or rather was for a short period before her end, seems clear enough', he wrote. 'The enormous mast can have only one meaning. No sea-going ship could have carried such a mast. Its weight would have turned her over. But a sheer-hulk we know was fitted with a mast of exceptional dimensions.' The ship must therefore have ended her days as a sheer-hulk and seemed to 'belong roughly to the latter part of the eighteenth century.'

This classification as a sheer-hulk was at once challenged in a letter to *The Morning Advertiser* on two grounds, one valid, the other quite the reverse. The writer pointed out, reasonably enough, that representations of ships at the end of the fifteenth century and the beginning of the sixteenth do show masts of enormous thickness, and that the *Mary Rose* did in fact capsize for no apparent reason, but spoilt his case by declaring that the stump of mast remaining in the wreck was not amidships, as a sheer-hulk's would be, but so far aft that it must be the mizzen. This mistake could only have been made on the assumption that the whole length of the ship

(or most of it) had been exposed; the official plan shows that the mast was certainly within a few feet of the midship section and that there was a considerable length unrevealed at the end nearer the river. I put it in this way because there was some doubt as to which way round the ship lay. Laughton himself was at first inclined to believe that the inner and more completely exposed end was the stern, but altered his opinion later on and was probably right in doing so.

Then came a report made for the Navy League by Mr (later Sir Julian) Corbett. He came out strongly in favour of an early sixteenth-century date, but based his conclusions on the quite unjustified assumption that the ship had originally measured 100 ft. on the keel with a beam of 40 ft., thus having the typical ratio of that period of  $2\frac{1}{2}$  beams to the keel. Where he had obtained his figures he did not say.

He mentioned that a report on the ship's dimensions and construction was being prepared at the Admiralty. This must have been a case of 'intelligent anticipation'; a Committee to study the matter was appointed some 3 weeks later, on 27 March 1914. It consisted of Mr W. H. Gard, Deputy Director of Naval Construction, as Chairman, Corbett himself, Laughton and Perrin, Admiralty Librarian, as Secretary. What this body intended to do, and what was actually accomplished in the 4 months before the outbreak of the First World War, is set out by Laughton as follows:

- I. The site where the wreck lay.
- II. The hull
  - A. The form and size of the wreck.
  - B. Historical note on tonnage measurement.  
Note on Matthew Baker.
  - C. Historical note on naval architecture.
  - D. Historical note on shipwrightry.
  - E. The wreck compared with known practice.
- III. The relics found in the wreck.
- IV. The question of identification.

Appendix: I. Glossary  
II. Bibliography.

'It was arranged that Perrin should undertake section I and Laughton the rest. The only parts which were completed... were II. A, B and C, with Appendixes I and II. These parts were circulated to the members of the Committee in July and were accepted. Perrin, with some help from Corbett, wrote a draft report on I which was not circulated. Neither of these partial drafts was discussed in Committee.'

What little I know about section I comes from two scraps preserved by Laughton. The first is in a letter from Perrin to him dated 24 April: 'He [Corbett] has gone over the reasons for supposing that the site of the ship was covered over by 1662. The evidence back to 1739 seems fairly sound, but as we can't find the original of the 1662 drawing,<sup>1</sup> the earlier evidence is undoubtedly weak. He suggests however that for sake of argument we might assume that 1662 holds and that you should attack that position with destructive criticism.'

The second is not in Perrin's writing, but is noted by Laughton as 'Woolwich ship—W.G.P. on the site'. It reads as follows: 'The ship was found in a plot of land known as Roff's wharf lying between the Borough Electricity Works and the wharf which gives access to the Steamboat Pier, a little to the east of the dock constructed about 1835 for Woolwich Steam Packets. *She was lying head in shore with stern about 50 ft from present edge of the wharf.*

- (1) Was there a dock there?
- (2) If not, how and when could she have come where she was?
- (3) The latest date she was buried.

There remains the third hypothesis that the place in which she was found was once a creek, but if this was so she must have been hauled into it before 1671, for neither the plan at that date nor any subsequent plan shows such inlet. *Still there is reason to believe that such an inlet did once exist.*'

To this Laughton added the following: 'The corner of the market place where the stem was, was familiarly known as the Dust Hole, which suggests that when the ship was burnt not all the ground over her was filled. The position of the lower stem (the upper part must have been burnt) showed the greatest decay, whence it seems likely that that was longest kept open as a rubbish dump.'

Laughton's own share in the intended report was very long and, as one would expect, very thorough. There was probably some thought of omitting parts of it, but Corbett noted that it was 'an excellent piece of work and it would be a great pity to cut any of it out'. Unfortunately it was written, as Laughton himself admitted in his later comments and additions, 'on the supposition that the Woolwich ship was *not* the *Henry Grace à Dieu*'. After his later complete conversion to the belief that it *was*, he was probably glad that the War had put an end to the Committee's work and that his earlier conclusions had never appeared in print. He had not then reached section IV and there is no indication of what his verdict would have been, but he had worked out some estimate of the ship's dimensions from the

<sup>1</sup> This may be Jonas Moore's 'Prospect and Map of London', published in facsimile by the London Topographical Society in 1912.

length of the keel from the midship section or the mast to the probable position of the 'touch' at the foot of the stem and believed them to be at most 114 ft. keel and 38 ft. beam.

How soon Laughton came to the conclusion that Seymour Lucas had been right after all is uncertain, but there is no doubt that he had done so before 1931, when he gave his lecture on the building of the *Henry Grace à Dieu*; for though he did not actually mention the remains at Woolwich either then or in a later note on the probable size and weight of the ship's mainmast, it is evident from such phrases as 'there is reason for believing that her mast was 52 inches thick at the heel' and 'I have, on what seems satisfactory evidence, taken a diameter of 22 inches for the spindle' that he was in fact basing much of his argument on those remains. Gregory Robinson described him very aptly as 'riding a pair of horses, one named Henry of the Calculations and the other Henry of the Mud—a foot on either'.

It seems likely that his final conversion had come by 1927. Among the very great number of pencilled additions and corrections to his manuscript report of 1914, probably—from the look of them—all written about the same time, there are references to work first printed in that year; while a section headed 'Scantlings' is actually noted as 'added Sep. 1927'.

Whenever it happened and however long it took, Laughton's conversion was, as I have already said, extremely drastic; it involved increasing the ship's estimated keel-length by 14 ft. and the beam by nearly as much, the new figures being 128 ft keel and 50 ft beam. These are the dimensions suggested in his pencilled alterations to his report. In his lecture in 1931 he went even farther, to 135 ft. keel and 55 ft. beam outside the protective 'blister' which he believed the ship carried.

It would probably be wise, but might well be thought cowardly, to leave the matter here and let readers draw their own conclusions. I must admit that I too have come to believe that the Woolwich ship was the *Henry Grace à Dieu*, if only for the simple reason that I cannot think of any alternative. On the other hand, I do not believe that either the ship at Woolwich or the ship of history, whether the same or different, was anything like as large as Laughton's later estimate. After his lecture in 1931 I suggested 125 ft. by 41 ft. as reasonable figures without knowing anything of the Woolwich ship and I still think them not far wrong.

To my mind the weakness of Laughton's reasoning lay in his failure to allow for what Gregory Robinson called the 'divergence' between his two sources of evidence, the remains and the records. He insisted on applying what he knew or surmised about the ship as built in 1514 to remains which could at best only belong to her after her rebuilding in 1536–9. What his

answer to this objection would have been can be judged from a note written in his copy of Williamson's article on 'The two ships called *Great Harry*' in *Blackwood's* for February 1914: 'There were not two ships of the name. The old ship was cut down to her futtocks in 1536 and rebuilt from them up with important changes.' This is the old question of what is meant by a 'rebuilding' and Laughton left no reference to his authority, but there is no doubt that some contemporary writers looked on the two ships as distinct. Williamson quotes a list of 1544 which includes four guns 'made for the old Great Henry' and a passage from Leland where he describes the dock at Portsmouth as still containing 'part of the ribs of the Henry Grace à Dieu, one of the biggest ships that have been made *in hominum memoria*'. This mention of size is important, because it suggests that the ship broken up had been bigger than her successor and that the drop in tonnage from 1500 to 1000 was not a mere matter of change in methods of estimation.

Here we come back to the remains of the mast. I mentioned at an early stage in the story that one of Laughton's chief objections to the identification of the wreck with the *Henry Grace à Dieu* was not only the size of the mast, but the fact that its construction did not agree with what he knew of the mast supplied to the original ship. At that time he gave no details and by 1931 he was ready to overlook any discrepancies, though perhaps there was no need for this. The 'rebuilding' may have included the stepping of a new mainmast; it must surely have involved the unstepping of the old one. If so, one would expect the mast of the 1500-ton ship of 1514 to have been even bigger than that found in the 1000-ton wreck. The thought is distinctly alarming.

One more point needs considering. Laughton never made it clear whether he believed that the ship whose remains had been discovered had had the protective belt or 'blister' which he believed had made the sides of the original *Henry Grace à Dieu* at least 4 ft. thick and had been responsible for the impractical shape of the sections of Elizabethan ships. Perhaps he did not; for in a later article on 'Hull Protection' in 1940 he gave it as his opinion that this feature began to disappear in the 1530's, just when the ship was being rebuilt. If there ever was such a belt, which for my part I do not believe, its disappearance was almost inevitable in view of the fact that this was the time when lower decks began to have ports all along the side. To cut such ports through 4 ft. or so of timber seems out of the question.

## GALLEON INTO SHIP OF THE LINE

*By Rear-Admiral A. Hugh Taylor,  
C.B., O.B.E., D.L., J.P.*

## III

HERE is little in the circumstances or conduct of the Third Dutch War on which we can look with satisfaction. Of the advance in the handling of the fleet shown in the St James's Day Fight there is little sign, but rather a reversion to the old loose method of following the flag officer; and even in this the ready mutual support which had been the brightest feature of our conduct in battle since Dungeness was lacking. And, for the first time for at least a century, we found the enemy's shooting better than our own. In short the Fleet was not in good heart.<sup>1</sup>

The Anglo-French Fleet had what should have been a decisive superiority in strength, but de Ruyter made such good use of his opponents' lack of a common doctrine and purpose and, as a soldier might say, such 'intelligent use of ground', that he was able to deny us the command of the sea. By his superb handling of his own squadron, particularly in the First Battle of the Schooneveld, he dominated the field of battle, as no one else but Nelson. What may well have accounted for much of his success was that in the spring of 1671 the Dutch, making a naval demonstration against the French from which Charles refrained, had a fleet of 37 sail at sea for three months under de Ruyter, with most of his flag officers under him.<sup>2</sup>

The French squadron of 30 joined the English fleet of 50 at St Helen's on 7 May. The Duke of York was in command of the fleet and of the Red squadron, with Sir John Coxe as Eldest Captain; the Earl of Sandwich deputy to the Duke and in command of the Blue; the Count d'Estrées in command of the White, comprising the French ships. Sandwich, as Vice-Admiral of England, and a man from whom d'Estrées could take orders in the Duke's absence, without loss of face, was the natural choice for Second-in-Command, but he hoisted his flag without enthusiasm. He disapproved of the war; he was no longer in the Duke's confidence; he had

<sup>1</sup> General references: Dr Anderson, *Journals and Narratives of the Third Dutch War*. (N.R.S. Vol. LXXXVI.) Colenbrander, *Bescheiden nit vreende archieven*. Vol. II. Warnsinck, *Admiral de Ruyter, Der Zeeslag op Schooneveld*. Corbett, *Fighting Instructions*. (N.R.S. Vol. XXIX.) Granville Penn, *Memorials of Sir William Penn. Dartmouth Drawings, Notes by Corbett*. (N.R.S.)

<sup>2</sup> *Third Dutch War*, p. 4.

'grown somewhat goutish and otherwise unwieldy'; he was sore from former imputations—'I must do something, I know not what, to save my reputation';<sup>1</sup> and he had a 'strong foreboding of death'. Only four of our nine flag-officers had served as such on St James's Day.

The Dutch were in a much better position. Ten of the fourteen flag officers had flown their flags in the same squadrons in 1666.

Tromp was still under a cloud, and his place as flag-officer in the van was taken by van Ghent, who had conducted the attack on the Medway in 1667.

Against the Allies' 80 ships and 2 small frigates, the Dutch had 62 ships and 13 small frigates; but as only 30 English and 12 French ships were of 60 guns or more and the Dutch had 39, the difference in fighting value was less than it appears.

De Ruyter had intended to attack the English in the River before they were joined by the French; through no fault of his own he was too late. He intended to fight with the weather gauge, but if he had to accept battle to leeward, to do it on his own coast. Accordingly, on sighting the Allies to windward on 19 May, de Ruyter kept away, and on 21 May the Dutch were so far to leeward that the Allies anchored in Sole Bay for water and provisions, preparatory to taking up position off the Dogger Bank in the path of the Dutch East India convoy and thus draw de Ruyter into the open. Sole Bay, in westerly winds, gave shelter and security, and in easterly winds the fleet could get quickly into open water; in face of an active hostile fleet, either the Thames or the Downs would have been a trap. Hoste, writing not long after the event, gives as an example to his readers the wise precautions by which the Duke saved his fleet, saying that de Ruyter expected to find it in disorder, but he had so placed it that 'having had advice of the coming of de Ruyter, he was soon in a condition to receive him'.<sup>2</sup> This is borne out by Marlborough's journal. At 2 a.m. on 28 August the *Prince* had begun to heel and wash; at 3.30 a scout reported the approach of the enemy; at 5.30 the *Prince* was under sail, standing to the northward 'to receive the Dutch Admiral, our ship being very clear and our men quartered'. The only signals the Duke seems to have made were that for the Line of Battle and the red flag signal to engage.

The Fighting and Sailing Instructions in force were the same as those in use on St James's Day, and embodied the additions made by the Lord High Admiral and Prince Rupert before that battle. The edition printed by Granville Penn,<sup>3</sup> and reprinted by Sir Julian Corbett, may well have

<sup>1</sup> Edward Montagu, F. R. Harris.

<sup>2</sup> Hoste, Fifth Part, Ch. 1.

<sup>3</sup> Penn, App. L. *Fighting Instructions*, p. 152. (N.R.S. Vol. xxix.)

been a revised version produced for issue to the French, since the articles are in more logical sequence, with a little rewording which, as sometimes happens, improved the sense at the cost of vigour.

Art. III, one of those issued after the Four Days Fight, read:

'In case the enemy have the wind of the admiral and fleet, and they have sea-room enough, then they are to keep the wind as close as they can lie, until such time as they see an opportunity by gaining their wakes to divide the enemy's fleet; and if the van of his majesty's fleet find that they have the wake of any considerable part of them, they are to tack and stand in, and strive to divide the enemy's body; and that squadron that shall pass first, being got to windward, is to bear down on those ships to leeward of them; and the middle squadron is to keep her wind, and to observe the motion of the enemy's van, which the last squadron is to second; and both these squadrons are to do their utmost to assist or relieve the first squadron that divided the enemy's fleet.'

There was a light breeze from E.S.E., and the Allied Fleet was swung to the south-going stream. The Blue Squadron, with Jordan at its head, made sail with the Duke to the N.E. by N., keeping as close to the wind as possible in compliance with Art. III. Sandwich in the *Royal James* kept away a little to allow some of his smaller ships, which had anchored nearer the shore to heel and wash, to get up into the line. Not so the Duke. Narborough says: 'The Duke thought himself never near enough to the enemy, for he was ever calling to the quartermaster who cunded the ship to luff her nearer.' He had only two ships in close company with him, the *Victory* astern and the *Michael* on the lee bow. Spragge's division, at the rear of the English Fleet, seems to have been complete, but some way to leeward. Harman, with the leading division of the Red, had been told by the Duke to lead on and keep close to the Blue. He was short of three ships, delayed by provisioning. Thus nearly all the Blue Squadron had succeeded in deploying into line, but only about half the Red. The French had gone off on the other tack. D'Estrées had sent his Major to the Duke to ask what commands he had for him, who answered him, that he desired he would keep his wind as much as he could. Meanwhile, Vice-Admiral Duquesne, at the south end of the French line, had kept the wind to the south-east, 'thinking it the best way to carry out his orders, and pick up the rest of his ships, several of which were to leeward; and had he taken the other tack he could not have got his ships into line, and ran a risk of not being able to get up (*s'éléver*)'.

Art. III was indeed neither clear in language nor sound in principle, as experience in this battle and that of the Texel next year was to show, but there is not a hint in the reports and journals of the officers present to imply

that the French were not doing what they could to comply with the Instructions, albeit unsuccessfully. The Duke's letter of 11 September 1673 to d'Estrées, unless a mere politeness, agrees.<sup>1</sup>

This suggests that although the signal for the Line of Battle was flying, the Duke of York and his officers put first the gaining of the wind, and expected flag officers of divisions to take the best way of doing it; and that rigid insistence on the maintenance of the line was a growth of later years when fleets were smaller, more homogeneous and more agile, and could be manoeuvred by the Admiral as a whole. When the Fighting Instructions were revised in 1691, the elaborate and obscure provisions of Art. III were replaced by signals to be addressed to flag officers of divisions. The responsibility for initiating such movements passed to the Admiral, but the execution was the flag officer's, and his flagship and her seconds were still the core of the division.

De Ruyter bore down on a course of about S.W., on a line of bearing about N.N.W.—S.S.E., with the squadron of van Ghent to the north of him, and that of Bankert to the south. Six ships and a fireship from each squadron had been detailed to lead the attack, perhaps with a view to attacking the Allies in the Downs, but the flag-officers, as usual, were the first into action. Van Ghent, with most of his squadron in close support, attacked Sandwich in the *Royal James* and his seconds towards 7.30; de Ruyter attacked the Duke and his two supporters a few minutes later; Banckert followed the French to the southward and 'saw them off'. About 8.30 van Brakel ran his ship aboard the *Royal James* athwart her hawse, immobilizing her and raking her with impunity, until noon when the *Royal James* dropped an anchor and cut van Brakel clear. Disabled, unsupported, and attacked by at least two great-ships, she was burnt by a fireship. (The Dartmouth drawing shows the *James* with her maintopsail backed but shaking and the mizen full. As she had no anchor down it was the wind, not the tide, that bound her to van Brakel's ship.)

Meanwhile, Jordan in the *Sovereign* with six of his division had succeeded, after 'an hour's dispute' with a Rear-Admiral, in gaining the wind of the enemy and tacking. He then 'maintained a hot dispute against an Admiral, Vice-Admiral and Rear-Admiral and 5 or 6 great-ships more'; if he had had a fireship with him he 'might have gone closer and done better service; that Admiral we observed bore into another party of ships to leeward, and in this smoke and hurry we could not well discern what was done to leeward'. Jordan had had 20 years' experience as flag officer of a division, but found little he could do. He was out of touch with the main body of his fleet, and his own force was too small to act effectively

<sup>1</sup> *Third Dutch War*, p. 407.

except in conjunction with the rest. This is the inherent defect, in all ages, of ingenious schemes of producing a concentration on one part of the enemy's fleet by dividing your own; the enemy gets the best of the bargain. The French, at the other end of the battle-field, did not even succeed in gaining the wind. But it was probably Jordan's position to windward, where further ships of the Blue were joining him, which obliged de Ruyter to break off action and withdraw. He had burnt the *Royal James* and carried two ships by boarding which he had to leave in our hands, and lost three of his own; but he had inflicted enough damage to prevent the Allies taking any effective action that year.

The methods of fighting followed by our flag-officers and captains in this battle differed but little from those of their forebears. The flag-officer led, his seconds supported him, the rest of the division took what part they could. The Admiral controlled his fleet mainly by example. The main weight of the Dutch attacks fell upon the flagships of the Red squadron and the *James*. Of the 26 ships which should have been in the line of the Red, 8 were driven from the line by disablement, and 4 of these were three-deckers. The fourth-rates took but little part in the battle, but the old *Rainbow* of 1617 withstood de Ruyter's own flagship.

For the Dutch fireships, this should have been a great day; the conditions for the tactical use of them could hardly have been more favourable. The first two sent against the *James* missed their mark, though one of them nearly set her next astern, the *Henry*, alight. The third, sent in after some five hours' fighting at close range had crippled her and weakened her crew, with the close support of Sweers and his seconds, was the only Dutch fireship to set her target alight. The spectacular destruction of the *James* masked the truth that the gun was master, that the fireship was fit only for destroying a beaten ship, and that if she could be got away, a prize was more use than a bonfire.

It is instructive to compare de Ruyter's attack with that of Nelson at Trafalgar, for among the great sea officers who taught the Royal Navy how to fight, de Ruyter deserves a very high place. Nelson, through Locker, was probably well acquainted with his methods. The wind was about the same, both in force and in direction relative to the two fleets; the enemy was taking up formation. A heavy attack was made upon the two principal flagships. Here the resemblance ends. Nelson's ships broke into the enemy's line, overwhelmed the ships thus isolated with gunfire, took 17 and burnt one, in about three hours; de Ruyter's ships remained in general to windward of their opponents and after some ten hours' fighting had to withdraw, leaving behind two ships he had taken and two of his own. For Jordan and the van had done what Dumanoir had been too late to do at Trafalgar.

It had already been decided, before the Test Act came into force on 29 March, that Prince Rupert should relieve the Duke of York in the command afloat, on the ground that the heir to the throne should be excused from 'hazarding his person'; the real reason may well have been the rising influence of those later known as Whigs.

In 1642 Prince Rupert had taught King Charles's cavalry to charge at the gallop, sword in hand, and 'to receive the enemy's shot without firing either carbine or pistol till we broke in amongst the enemy, and then to make use of our firearms as need should require'; in such a charge he had broken Cromwell's horse at Edgehill, and he did not forget it at sea. Then for three years he had kept the sea with the Royalist ships with no resources but his own spirit, while the exiled Court lived on his prize money. In 1664 Pepys records on 5 September that he told the Duke of York: 'God damn me, I can answer but for one ship, and in that I will do my part, for it is not as in an army where a man can command everything.' All too true. At Lowestoft in 1665 due to the slowness of the Duke's signalman and in the Four Days Fight, in 1666, due to the loss of his masts, he had lost the chance of getting his squadron into close action. He had reorganized the fleet before the St James's Day Fight. And in that battle, as joint commander with Albemarle, he had seen the Dutch fleet thrown into confusion by the defeat of its leading squadron. In 1672 he was carrying out the Whitehall duties of the Lord High Admiral, and when he hoisted his flag in 1673, he was in sole command of a large fleet for the first time, except for a few weeks in 1666. He was 53.

Personalities had quite as much effect on the coming battles as the powder and shot. Spragge the second-in-command had quarrelled with Holmes, who was not allowed to serve in the same fleet, though the Prince wanted him. Then Spragge had been sent to France to arrange the junction of the fleets, apparently without the Prince's knowledge: not the best way to restore harmony. Moreover, Spragge had his personal quarrel with Tromp. He is said to have told the King he would bring back Tromp dead or alive, or fall in attempting it: a good stimulus to close fighting had Spragge not allowed it to come between him and his duty to his Admiral and his squadron.

Harman the Vice-Admiral Red and Kempthorne the Vice-Admiral Blue were both able and experienced officers, but Harman was sick with the gout, which was to carry him off in the autumn. Chicheley the Rear-Admiral Red had little experience afloat and had got himself captured at Sole Bay. Narborough, selected as Rear-Admiral Blue, was not back from the Straits; his place was taken by Lord Ossory—no seaman, but respected for his gallantry and character; Narborough served as his Flag Captain in the Battle of the Texel. Haddock had been appointed as the Prince's

First Captain; though reputed to be a good seaman, the Prince thought but little of him, and after the Second Battle of the Schooneveld he was relieved by order of a court-martial 'not being well approved of',<sup>1</sup> and made a commissioner in the navy.

D'Estrées, as Admiral White, was the only flag officer not changed since the year before. Duquesne, having disagreed with his chief, had been relieved by the Marquis de Martel, but he joined only in time for the Battle of the Texel. He also disagreed with his chief and ended up in the Bastille. Des Ardents commanded the French van in the first two battles, the rear in the third; in the first two, the rear was commanded by the Marquis de Grancey.

The Prince of Orange had succeeded in making the peace between de Ruyter and Tromp, who replaced the dead van Ghent in command of the van, the Amsterdam ships; de Ruyter, in the centre, had the Rotterdam ships, and Banckert, in the rear, the Zeelanders.

The Allies, at the outset, had 76 ships of 40 guns or more, the Dutch 52; but in ships of 60 guns or more the Allies had but 42 to the Dutch 34. Of these, 12 of the Allies' ships were of 80 guns or more, and only 5 of the Dutch. In these ships, mainly flagships, lay the Allies' superiority. The Allies had 10 small frigates and 42 fireships, the Dutch 12 and 25; both fleets had large numbers of small craft in attendance.

Though Prince Rupert won no battles, he accomplished, without losing a ship, two things that no other sea officer had even attempted. He took a fleet of 50 sail out of the Thames, in face of the enemy, with a foul wind and an ebb-tide; and he took a fleet of 100 sail or more within the Dutch sands and fought two actions there, relying on the lead.

By 16 May the Allied Fleet was assembled in Rye Bay and next day a Council, held in the presence of the King and the Duke of York, resolved that if the enemy was still in the Schooneveld, we should attack him there. In the belief that the enemy would not offer battle but retire over the banks, it was agreed that 35 ships of lighter draught, with 10 fireships, should be detached from their squadrons, under the command of their Eldest Captains, to follow him in. The Prince wished them to retain and regain their posts in the Order of Battle, but the French seem not to have understood, for many of them did not resume their places in the line and hampered the heavy ships getting into action.

On 22 May the Allies anchored off the Schooneveld, but the weather continued stormy until 28 May, when at 10 a.m. and high water, the fleet weighed and went in to attack, preceded by the advanced forces, with smacks and ketches marking the shoals. The Dutch Fleet, instead of

<sup>1</sup> Colenbrander, Vol. II.

receiving the attack at anchor or slipping over the swashways, weighed and stood to the northward, Tromp's squadron leading and hugging the wind. Prince Rupert, perhaps remembering Edgehill, did not recall the advanced ships. Some resumed their places in the line, but not so the French. The Red was on the left, the White in the centre, the Blue on the right. Four of the French captains steered for the Dutch van and came into action at the head of the Red Squadron, about noon. Tromp had 17 ships, Rupert 26 of his own and at least 4 French. Thus, for once, there was an actual numerical concentration on a part of the enemy's fleet. Tromp's flagship was disabled and had to bear away, followed by most of his squadron; but the advanced ships lacked the force to disable the Dutchmen themselves, and got in the way of the heavy ships, which never got into a fair line of battle in which they could make full use of their gun-power. Moreover, the Prince found to his disgust that the *Royal Charles*, in spite of Deane and Archimedes, was too tender-sided to keep her lower-deck gun-ports open. 'It looked like victory', says one of the French captains, 'but somehow failed'.<sup>1</sup> About 3 p.m. the leading ships found the water shoaling to 8 fathoms and had to tack, with some difficulty, to the S.W., having failed to drive Tromp's squadron completely out of the line, which would have obliged him to run into the Veergat and separated him from his main body.

Spragge, accompanied by de Grancey and the French rear, had been pressing hard upon Banckert and the Dutch rear; his flagship was disabled and his squadron in confusion, and he had to bear away to reform. 'We were taking to the musket', says de Grancey,<sup>2</sup> 'when I saw de Ruyter with his squadron to windward of me, which compelled me to come back to the wind.' For de Ruyter with some 25 ships had turned to the S.W., passed through the division of d'Estrées, who had been left with only some 14, and thus cut the Allied fleet in half. For the moment he was master of the field. Spragge and de Grancey had to haul off to the westward, allowing Banckert to reform his squadron and rejoin his Admiral. About 5 de Ruyter turned back to the northward to regain touch with Tromp, and by about 7 the Dutch fleet turned again to the southward, reunited. Spragge had at last drawn abreast of his personal enemy Tromp, and supported by Arthur Herbert in the *Cambridge*, went in to attack him. Tromp's new flagship was disabled and he had to shift his flag a second time, but the *Cambridge*, heavily damaged, fell to leeward of the Dutch and would have been taken or burnt had she not been towed clear by the boats of the *Glorieux*. The action continued on a southerly course till dark, apparently with little effect. Three ships on either side had to be sent into port, but except in Tromp's squadron, the casualties appear to have been light.

<sup>1</sup> De Valbelle, Colenbrander, Vol. II, p. 238.

<sup>2</sup> Colenbrander, Vol. II, p. 235.

The Prince's report concludes: 'I hope His Majesty will be satisfied that, considering the place we engaged in, and the sands, there was as much done as could be expected.' His disappointment is plain. Spragge wrote: 'Whatever resolutions and designs the enemy had by lying in the Schooneveld, I am persuaded that our ill conduct and most notorious cowardice will make them take new measures, and instead of being in their own defence before, they will now (with great reason) be the offenders and seekers.'<sup>1</sup> So it proved. At 11 a.m. on 14 June, in a fresh N.E. breeze which put them to windward, the Dutch got under way. The Allied Fleet was in the order, north to south, Blue, White, Red; but the Prince, losing patience with Spragge and the French, cut his cable and pressed sail through the White squadron, keeping his sails full in the hope of drawing the enemy into the open. Spragge, instead of keeping the wind as he should, laid his topsails aback to stay for Tromp; but as d'Estrées says, the enemy 'did not intend a decisive battle, but just to gain time and waste our powder'.<sup>2</sup> At dark, de Ruyter returned to his anchorage, having succeeded in driving us home to replenish powder and shot, without impairing the activity of his own fleet.

At the Battle of the Texel on 11 August there were 86 Allied ships of 40 guns or more, 56 English and 30 French, against 60 Dutch. Thirty-eight of the Dutch were of 60 guns or more; there is no exact list of the Allied Fleet, but they do not seem to have had more than 45; their superiority was less than it appears; but it was personalities that ruled, not guns.

At day-break the Dutch were 9 miles to windward, S.E., and both fleets steering E.N.E. About 7 the whole of our fleet tacked together 'by which tacking the fleet was brought into a very good line and order', White leading, Blue in rear. De Ruyter wore his fleet in succession from the rear and stood to the southward, Banckert leading, Tromp in rear, 'edging towards us, until half an hour after eight, when they bore right down on us'.<sup>3</sup>

Complying with Art. III the White Squadron, followed by the Red, stood on close to the wind under topsails and foresail. 'Our fleet being extended longer than the enemy's, and the wind coming to the south, the French lay fair to get the wind of them'.<sup>4</sup> But Evertsen with his division of 8 stretched ahead and prevented de Martel at the head of our line from getting the wind of him. Banckert and the rest of his squadron remained in station ahead of the centre squadron, leaving d'Estrées and his division without an immediate opponent. About 11 this division led by Tourville tacked, passed through the head of Banckert's division, and gained the

<sup>1</sup> *Third Dutch War*, p. 320.

<sup>3</sup> *Third Dutch War*, p. 390.

<sup>2</sup> Colenbrander, Vol. II, p. 262.

<sup>4</sup> *Third Dutch War*, p. 381.

coveted position to windward, followed eventually by the whole of the White Squadron, while Evertsen made his way back to join his main body.

To comply with Art. III Spragge should have pressed on in support of the centre, but being 'provoked' by Tromp, 'laid his foretopsail to the mast to stay for him, contrary to His Highness's express orders and his own duty'.<sup>1</sup> In this Homeric contest between the two Admirals and their supporters, Spragge's flagship, the *Royal Prince*, was dismasted, and both squadrons drifted far to leeward of the main bodies.

About 10 'there fell a great shower of rain and very thick weather', in which the wind veered to S.W., giving the Allies the weather gauge. About 11 when the weather cleared it could be seen from the Prince's flagship that the White Squadron had tacked and weathered both fleets, where they remained at long range. De Ruyter had pressed in between the Prince and his rear division under Chicheley; and thus the Prince found himself with some 30 ships engaged by the van and centre of the Dutch, some 40 ships in all. The Prince bore away to rejoin Chicheley and then, seeing the Blue Squadron some 9 miles to leeward and 'not hearing the guns well plied',<sup>2</sup> bore right away to relieve them. De Ruyter followed, and the two fleets stood down side by side within cannon shot, but not firing.

When the Prince closed the Blue Squadron at about 4, he found the *Prince*, Spragge's flagship, dismasted, Tromp trying to take possession of her, Kempthorne to windward of him and Ossory to leeward, covering the *Prince*, and Spragge drowned while shifting his flag for the second time. Many ships of both sides were repairing damage.

About this time Prince Rupert hoisted the Blue Flag which directed all ships to bear up into the Admiral's wake or grain. Thirteen or 14 ships of the Red and Blue came into line, but not the White; for d'Estrées 'thought he ought to keep the advantage of the wind . . . without express orders from His Highness'.<sup>3</sup> About 5 de Ruyter closed and there was a sharp action for two hours on a N.W. course; towards sunset the Prince thought it time to carry off the disabled ships; 'the enemy, when dark night came stood off towards their own coast, which I had reason to be glad of'. For the third time the two fleets had fought without losing a ship on either side, except fireships expended without effect and Ossory's yacht.

What Legge thought of Spragge's conduct is clear from the amendment he made to the instructions in 1688: 'No ship or division whatsoever is upon any pretence to lie by to fight or engage the enemy whereby to endanger parting the main body of the fleet till such time as the whole line be brought to fight'.<sup>4</sup> Nevertheless, Spragge, from whatever motive, good

<sup>1</sup> *Third Dutch War*, p. 381.

<sup>3</sup> *Third Dutch War*, p. 392.

<sup>2</sup> *Third Dutch War*, p. 383.

<sup>4</sup> *Fighting Instructions*, p. 170.

or bad, did succeed in bringing about the sort of mêlée Nelson wanted. Thus the action in the rear deserves some further examination.

Though the two squadrons were about equal in number, Tromp's was superior in force, for he had 12 ships of 60 to 80 guns built since 1663, with 5 new and 4 older ships of 40 to 60. Spragge had 6 ships built since 1666, 4 three-deckers and one 70; 4 ships of King Charles's time; 7 large frigates of Cromwell's time; and 5 fourth-rates. Now Narborough, Ossory's Flag Captain in the *St Michael*, 96, says: 'The enemy shoots much more shot than we do, and ply their guns faster; they shoot much pound shot, which fly so thick and cut our rigging so much. When the enemy came near us, I could perceive our shot were well placed in them, but when they were at any distance, our shot often fell short.'<sup>1</sup> Though our fleet was short of men and not in good heart, these words suggest that in the new Dutch ships the guns could be more readily worked and that a better rate of fire could be maintained than in the cramped old ships which formed so large a part of Spragge's squadron. When engaging on opposite courses the lesser ships could support the greater, but they were scarcely fit for the task that Spragge had laid upon them. The use of pound shot by the Dutch recalls Monson's advice to load the ordnance with 'musket bullets, cross-bar, langrel shot and billets'.<sup>2</sup>

None the less, by about 4 Ossory, says Narborough, was resolved to bear down on Tromp 'our Blue squadron being got pretty well together and in good condition for the major part of them'.

This battle brings to an end what might be called the Age of Blake. There were to be no more actions between assemblages of a hundred ships ranging from the *Sovereign* of 1522 tons to the *Falcon* of 349, fighting in groups in Homeric style round the flagships of their leaders. By the development started by Blake after his defeat at Dungeness the mixed fleet of great-ships, frigates and hired ships was now to be transformed into an organized body of ships of similar armament, though not of equal size, capable of control by signal from the Admiral.

To Samuel Pepys, as was fitting, fell the execution of the crucial stage in the transformation of the fleet initiated by his first patron, Sandwich, when he urged the Council of Flag Officers in 1665 to exclude from the Order of Battle the hired merchant ships and small frigates which he thought not fit to lie in the line.

On 15 June 1673, when the Test Act obliged the Duke of York to give up the post of Lord High Admiral of England and the office was put into commission, the King called Pepys, the only survivor of the officers appointed to the Navy Board at his restoration, from his charge of Clerk

<sup>1</sup> *Third Dutch War*, p. 356.

<sup>2</sup> *Monson's Tracts*, Vol. iv, p. 94.

of the Acts to that of secretary to himself and to the new commission. The King kept some of the powers in his own hands, notably the making of appointments and the ordering of ships' movements, and had at his elbow the Duke, still Lord High Admiral for Scotland, Ireland and the colonies oversea. As Prince Rupert the First Commissioner was chief commander of the fleet and the other fourteen commissioners were high officers of state, virtually a committee of the Privy Council. Pepys's position was rather that of Secretary of State for the Navy than of Secretary of the Admiralty as it has been since he withdrew. And, having been a member for the Castle Rising Division of Norfolk since 4 November, he was the spokesman for the Admiralty in the House of Commons. With its two subsidiaries, the Navy Board and the Commission of Victualling, the Admiralty, says Mr Ehrman,<sup>1</sup> was perhaps the largest employer and consumer of material in the country.

In March 1674, a month after peace with the Dutch, Pepys and Deane began putting their heads together about the repair and reconstruction of the fleet. Deane had built the *Rupert*, one of the four ships we laid down in reply to the new Dutch two-deckers of 1663; in 1668 he went to Portsmouth as Master Shipwright; in 1670 he wrote for Pepys 'The Doctrine of Naval Architecture'; in 1672 he became Resident Commissioner at Portsmouth. Though he had explained to Pepys his manner of 'casting the draught of water which a ship will draw' on the principle of Archimedes, this did not save him from giving the *Royal Charles* too little beam to carry her lower deck gun-ports open at the Battle of the Schooneveld, and she had to be girdled with ten inches of timber each side. Prince Rupert had shifted flag to Pett's *Sovereign*.

When Colbert expanded the French Fleet in 1666, he ordered six ships of the new type from Holland, and with the help of designers brought from Italy, improved on it. When the French Fleet came to St Helen's in May 1672, the King and Duke commended the *Superbe* and commanded Deane to build a ship as near as he could of her dimensions. This ship, the *Harwich*, 70 guns, was completed in 1674 and was the pattern for the 20 third-rates built under the Act of 1677, and hence for the 74-gun ships of later years.<sup>2</sup>

On 12 October 1674 Deane presented his report to the Navy Board.<sup>3</sup> To set a fleet to sea, fifty ships needed repair, which would take a year; twenty needed replacement, which would take two years more. Without twenty new ships, our strength would be no more than one-third of the

<sup>1</sup> John Ehrman, *The Navy in the War of William III*, p. 174.

<sup>2</sup> J. R. Tanner, *Catalogue of the Pepysian Manuscripts*, Vol. I, p. 226. (N.R.S. Vol. xxvi.)

<sup>3</sup> *Catalogue*, Vol. I, p. 43.

Dutch nor three-fifths of the French. Though in October 1675 Parliament voted £300,000 for building the twenty ships, the Whigs tacked to it an appropriation on the Customs, already ear-marked for the upkeep of the fleet; unable to accept this, the King prorogued Parliament.

When the House met again in 1677, public opinion had swung from jealousy of Dutch commerce to fear of French ambition, fully justified by the far-reaching aims of Colbert, even more than by the rising strength of the French fleet.

On 21 February Pepys addressed the House in committee and we have his notes.<sup>1</sup> During the Commonwealth we had to hire fifty merchant-ships to equal the Dutch, but our victories had been due to the great-ships built by Charles I. Since that time the Dutch had 'got before us by a constancy of disbursing money' and now exceeded us by forty-four ships, the French by twenty-four. (Since 1666 we had built but seventeen over 700 tons.) First-rates were not needed against the Dutch but against the French, who could build as big or bigger. They will 'bear shot... and batter better than any other'. Second-rates need fewer men, less draught of water, less weight of ordnance and shot, but having three decks are 'as terrible to the enemy', being as lofty and 'playing down to them'. 'More fourth-rates were quite unnecessary; they serve only for convoys... and to fight against the Turks... besides that they are at any time soon run up and their want supplied by merchant-ships.'

This important decision, ratified by the approval of Parliament, brought into being the Ship of the Line, though that term did not come at once into regular use. And the fourth-rate still found a place in the line, particularly on foreign stations.

The House of Commons voted £600,000 payable quarterly for two years, for building thirty ships: one first-rate, nine second-rates and twenty third-rates. Unjustly suspecting that the King would take some of this money for purposes of his own, the House specified that the ships of the three rates were to be of not less than 1400, 1100 and 900 tons. The King, however, insisted on the dimensions being enlarged, saying 'he would make it good out of his own purse rather than hazard the wronging of the ships for lack of it'. They were put up to 1700, 1400 and 1100 tons. King Louis's money was well spent.

The establishment of men and guns for ships both new and old was 'largely debated' at a Board meeting on 17 May 1677, in the presence of the King and with the attendance of the officers of the Navy Board and Ordnance Board and several Flag Officers and Captains.<sup>2</sup> Of those taking part, Prince Rupert had both jointly and singly commanded the fleet in

<sup>1</sup> *Catalogue*, Vol. i, p. 48.

<sup>2</sup> *Ibid.* Vol. iv, p. 425.

action, Allin a squadron, Ossory and Legge a division; Haddock, Narbrough and Wetwang had served as first or second captain of a flagship; Herbert as second to Spragge had seen much fighting at close range, and was to hold the chief command under King William.

The establishments agreed for the thirty new ships was:

First-rate: 26 42-pr.; 28 18-pr.; 44 6-pr.; 2 3-pr.; total 100.

Second-rate: 26 32-pr.; 26 18-pr.; 36 6-pr.; 2 3-pr.; total 90.

Third-rate: 26 32-pr.; 26 12-pr.; 14 6-pr.; 4 3-pr.; total 70.

The new establishments were 'settled with general approbation', confirmed by the Board of Admiralty on 3 November. Thus the 32-pr. became the principal armament of the Ship-of-the-Line. A hundred years later, to improve the sailing of the first-rate, the 32-pr. replaced the 42-pr. Improvements in construction and in the supply of long-beam timber allowed the substitution in many ships of the 24-pr. for the 18-pr. With these modifications the establishments of 1677 remained in force throughout the wars with France; the most notable change in weapons between the time of Pepys and Nelson was the addition of the carronade.

As Sir Westcott Abel has pointed out, we found no time in the wars with France for new designs; those set up in 1677 lasted with little change until Trafalgar.<sup>1</sup>

The composition of the fleet, with its high proportion of three-deckers, also continued throughout the wars with France, and was triumphantly vindicated at Trafalgar. This policy was not followed by our rivals and not unquestioned here, though Evelyn must surely have been mistaken in taking seriously Pepys's remark at dinner that big ships 'were for nothing but to gratify gentleman-commanders, and must submit to those who should encounter them with fireships supported by frigates'. For in his Naval Minutes Pepys had written: 'I may truly challenge to myself to have been the chief, if not the only occasion of the last parcel of the best ships that ever were built in England by my contending for them and their large dimensions in Parliament, even against the opinion of some of our own sea-flag-officers there.'<sup>2</sup>

For once in our history we did not wait for war to tell us what we needed and then build hastily not what we wanted but what we could.

The Fighting Instructions of 1666 remained in force without significant change. The issue of 1691 substituted for the elaborate prescription in Art. III for attacking an enemy to windward, a group of manoeuvring signals. With these and other manoeuvring signals added from time to time, the process of transition into a signal code, consummated by Lord

<sup>1</sup> Sir Westcott Abell, *The Shipwright's Trade*, p. 102.

<sup>2</sup> Pepys, *Naval Minutes*, N.R.S. Vol. LX, p. 13.

Howe in 1777, had already begun; the pocket book published by Jonathan Greenwood in 1714 was in effect such a code.

Here ends this survey of the deeds and words of the men who made the battle fleet. Few of them put their thoughts on paper; of what was said at the Councils of Flag-Officers, little is known. It is by their deeds that they must be judged. It was upon mutual support that their successes were founded; the undue adherence to a rigid line of battle which produced the 'half-begotten battles' of the eighteenth century, a danger Sandwich and Rupert had foreseen, reached full growth in later years when war experience had been forgotten.

LATOUCHE-TRÉVILLE AND HIS PROPOSAL  
TO EXPLORE THE SOUTH COAST OF  
NEW HOLLAND<sup>1</sup>

*By John Forsyth*

WHEN Captain James Cook was out in the Pacific Ocean on his second voyage of discovery, a young French naval officer, Louis René Madeleine Le Vassor de Latouche,<sup>2</sup> made a proposal to the French government for a voyage of exploration and annexation which might, if it had taken place, have given rise to a French claim to sovereignty over those parts of Australia which now form the states of South Australia and Victoria.

Cook, in his previous voyage, had sighted the east coast of the continent in April 1770 in about latitude 38° S., near the present boundary between New South Wales and Victoria. On reaching Possession Island in Torres Strait, the farthest point eastwards that the Dutch had discovered, he ceremonially took possession of the country from the latitude of his land-fall down to that of 10½° S. in the name of his Majesty King George the Third of Great Britain; and, with those limits, the claim to the land called New South Wales was notified to the world in 1773 in Hawkesworth's official account of the voyage.

Except for that part of Tasmania which had been discovered by Tasman in 1642, and was claimed by him for the Dutch by the name Anthonij van Diemens land,<sup>3</sup> the discoveries of that nation on the south side of the continent had not extended farther east than Nuyts Archipelago in about 133° E. Up to those islands it had been discovered by Pieter Nuyts and François Thyssen in 1627.

The coast between Nuyts Archipelago and the beginning of Cook's discovery was, with the exception mentioned, undiscovered, and lay open to a claim of annexation by its first discoverer. To what extent a ceremony

<sup>1</sup> The documents referred to herein as existing in French archival repositories are cited from the Hélouis Transcripts in the possession of the Trustees of the Public Library of New South Wales, made about the years 1912–16. The letters set out in the Appendix are reproduced from these by permission of the Trustees.

<sup>2</sup> He was known when young as Latouche; but later used the name Latouche-Tréville, which he had from his uncle.

<sup>3</sup> To distinguish it from the Van Diemens Land in the north of New Holland named by Pieter Pietersz in 1636. The 'Anthonij' seldom appeared on maps and was soon forgotten.

of annexation would have given rise to rights which other nations would have been bound to recognize was doubtful, but it would have been at least as efficacious as that which Cook performed at Possession Island.<sup>1</sup>

How the coast trended between the farthest point discovered by the Dutch and Cook's landfall could only be guessed, but most geographers assumed that Van Diemens Land formed part of the mainland of New Holland, and many cartographers<sup>2</sup> showed it as joined to that mainland on the west by a conjectural coastline curving northward and westward, and on the east by an extension southward of the fictitious or conjectural east coast of the continent. Cook's discovery in 1770 that the southern part of the east coast of the mainland ran almost as these cartographers had conjectured seemed to confirm their speculations; though Cook himself had stated that he could not determine whether it joined Van Diemens Land or not.

Du Clesmeur, the second-in-command in the expedition of Marion, the next European after Tasman to lead an expedition to Van Diemens Land, was satisfied that the cartographers were right. He reported, on his return to France in 1773, that in view of the resemblance of its natives (which they had been the first to see) to those described by Dampier, little doubt could remain that it formed part of New Holland.<sup>3</sup> Furneaux had been satisfied in the same year, by what he saw of the east coast of Van Diemens Land, that the two lands were joined—a view which was afterwards adopted by Cook.

The details of Cook's voyage in the *Endeavour* were first made known by the publication in London in 1771 of the anonymous *A Journal of a Voyage round the World in H.M.S. Endeavour in the years 1768–1771*. No map was published with this work, but the official account of the voyage, edited by Hawkesworth and published in 1773, and the French translation of it as *Relations des voyages entrepris par ordre de Sa Majesté Britannique*, published in Paris in 1774, each contained a map of the world in which Van Diemens Land was shown as joined on the east to the coast of New South Wales and on the west to Nuyts Land (see Frontispiece).

Those who relied on the most up-to-date geographical writings and maps of the period would, therefore, have had reason to expect that cor-

<sup>1</sup> Cook believed that the discoverer of a new land acquired the sovereignty over it *ipso facto*, or by such a ceremony (*Journal*, 22 August 1770). His secret instructions were drawn up on the assumption that a ceremony had some efficacy.

<sup>2</sup> E.g. the anonymous maker of the Bonaparte–Tasman map, Thomas Bowrey, John Thornton, J. N. Bellin and Robert de Vaugondy. See also Pl. I.

<sup>3</sup> Du Clesmeur, 'Relation d'un Voyage . . .', Bib. Nat. Paris, MSS. Nouv. Acq. Fr. No. 9437, p. III.

responding to the south-east coast of New Holland, of which Cook had made a favourable report, there would exist a south-west coast equally suitable, by reason of its latitude, for European settlement.

The south coast of New Holland had not passed unnoticed as a possible place for a European colony: indeed, in the earlier years of the eighteenth century, a propaganda in favour of its settlement had been conducted in Batavia, in Holland, and in France by a certain Jean Pierre Purry, a citizen of Neufchâtel. Purry, who had entered the service of the Netherlands East India Company, had begun by presenting to the Governor-General at Batavia, Christophe van Swol, in May 1717, a memoir of the advantages which would accrue from the settlement of the Land of Pieter Nuyts in  $38^{\circ}$  S.—that is on the shores of the Great Australian Bight. Van Swol appears to have thought the project worthy of further consideration and gave Purry leave to return to Holland so as to bring the matter before the directors of the company.

This Purry did, and in 1718 he published in Amsterdam, in Dutch and French, the memorial which he had addressed to van Swol, with a covering epistle addressed to the Gentlemen Seventeen. Later in the same year he put out, again both in Dutch and in French, a further memorial amplifying the first.<sup>1</sup>

His proposal did not meet with approval; indeed, according to the account of the matter given by one of his colleagues, ‘a friend of his told him privately that he had best get out of the way, for that some things had been observed in both papers which should not be made public’.

He accordingly went to France, where he brought his scheme to the notice of several of the ministers. It was referred to the Académie des Sciences for the consideration of the learned, and an account of it was published in the *Journal des Scavans*. Eventually the secretary of the Academy reported that the members were not prepared to offer an opinion on a country which they had never seen, but that they considered it inadvisable to make expensive settlements in unknown places.

Rejected in France as in Holland, Purry moved to England, where he became an advocate of colonization in the Southern States of America, to which he afterwards emigrated. In 1744 his proposal for the settlement of Nuyts Land was revived by one of his associates in England, who in that year published a translation of his memorial to van Swol, with a short account of his attempts to bring the colony into being.<sup>2</sup>

<sup>1</sup> *Aanmerkingen: betreffende...het Landt van Pieter Nuyts; Memoire sur...La Terre de Nuyts* (both Amsterdam, 1718). *Tweede Aanmerkingen; betreffende...het Landt van Pieter Nuyts; Seconde Memoire sur...la Terre de Nuyts* (both Amsterdam, 1718).

<sup>2</sup> *A Method for Determining the Best Climate of the Earth* (London, 1744).

It was against this background of knowledge and speculation that Latouche in 1774 made his proposal to the newly appointed Minister for Marine, M. de Sartine.

Latouche was then about 30 years of age though he held the comparatively junior rank of capitaine de brûlot. His family, which had been connected with the French West Indian colonies since their foundation, had been ennobled in 1706; his father, who had been governor of those colonies, was Commandant de la marine at the naval port of Rochefort. His uncle Latouche-Tréville was a lieutenant-général de la marine and followed his brother in the command at Rochefort.

Latouche, the son, had entered the naval service at the age of thirteen years and had served in a number of ships; but in 1768 he had withdrawn from it on account of ill-health. After serving for a time as an officer of dragoons he had rejoined his former service in 1772 as capitaine de brûlot.<sup>1</sup>

Writing from Fontainebleau on 19 October 1774, the capitaine de brûlot laid before the Minister a plan for a voyage of exploration and circumnavigation for which he begged him to obtain the King's approval. He stated in this letter<sup>2</sup> that he had made some enquiry into the achievements of the various navigators who had become famous by reason of voyages such as that which he now proposed, and had been grieved to find that France had not had her proper share of the honour of making discoveries in the southern hemisphere and the Pacific Ocean. He observed that since the voyage of Gonnehville in 1503 only La Barbinais le Gentil in 1714 and Bougainville in 1766–9 had made the circuit of the globe; it was time, he said, that the French showed the world that they could perform great voyages of exploration.

In his statement with regard to past circumnavigations Latouche was utterly mistaken, though he was not alone in his erroneous belief. Leading French writers on the history of geographical discovery, including Bougainville and Fleurieu (the latter Sartine's chief adviser on matters relating to exploration) were of the same opinion. Had the records of the activities of the French merchant service in the Pacific been as well known then as the painstaking work of Dahlgren has since made them, Bougainville and Fleurieu, and possibly Latouche too, would have known that it was the French alone who had been accustomed to circumnavigate the world in the

<sup>1</sup> Guérin, *Histoire Maritime de France*, Vol. v, p. 497, distinguishes the various members of the family then serving in the French navy, drawing his information from Arch. de la Marine, Cartons 'Latouche' and 'Le Vassor'. See also Hamy, 'James Cook et Latouche-Tréville', *Bull. géographie hist. et descript.* (1904), pp. 206–22, at p. 210, and note (2). I am indebted to Hamy for much of the information herein.

<sup>2</sup> Hamy, *loc. cit.* p. 211.

ordinary course of their trading voyages, and that of the circumnavigations performed between that of Magellan's *Victoria* and that of Bougainville's ships, at least one-half were performed by Frenchmen in French ships.<sup>1</sup>

In the plan for the voyage<sup>2</sup> Latouche asked that the frigate *Aurore* of 18 guns and a complement of about 190 be made ready to depart in the June of the following year. In her he proposed to make his way into the Pacific by the Strait of Lemaire in the December or January following and to go to the island of Juan Fernandez to refit. That done, he would sail north, and, turning west between the parallels 10° and 5° S., search as far as 140° west of Paris. If he found no new place suitable for refreshing in that climate he would make for Tahiti for the purpose. From Tahiti he would search to the westward again, but between the parallels of 20° and 25° S., where Cook (he said) considered there were good hopes of making discoveries and had invited those who followed him to sail. When he got to 175° W. he would break off and sail down to the Bay of Plenty<sup>3</sup> in New Zealand.

Having refreshed once again in New Zealand he would turn his attention to the main object of the voyage. In midsummer he would sail to the southern extremity of New Holland called Van Diemens Land and spend some three months in exploring the south coast of the continent, a task which no other explorer had attempted. Should the wind and sea not permit him to reach this south coast he proposed to follow Cook's track northward as far as Sandy Cape in New Wales ('Nouvelles Galles') from which point he intended to stand off shore to avoid its dangers until he could make a course through Torres Straits and go to Batavia. If, however, he were able to round Van Diemens Land, he would carefully explore the south coast of the continent as far as the Land of the Leeuwin and from there sail to the Isle de France, or, if the condition of his ship permitted, sail up the west coast also, and go to Batavia.

To meet the possibility that he might be delayed in crossing the Pacific Ocean and not reach New Zealand in time to allow him to be on the coast of New Holland by midsummer, Latouche proposed a further alternative. In that event he would sail from New Zealand via New Britain to the Philippine Islands, on which course he confidently expected he would make some new discoveries which, by their utility, would compensate for those he had been compelled to renounce.

<sup>1</sup> E. W. Dahlgren, 'Voyages français à destination de la Mer du Sud avant Bougainville, 1695-1749', in *Nouvelles Archives des Missions Scientifiques* (Paris, 1907).

<sup>2</sup> Hamy, *loc. cit.* pp. 212-16.

<sup>3</sup> La Baye d'Abondance, Cook's name. He makes no reference to the names given thereabouts by Surville and Marion.

To the plan for the voyage were attached schedules of the manning, equipment, and stores necessary for its accomplishment. The manning schedule included five domestics for the Captain and a scientific staff of four. That the intention was to annex the land, the discovery of which was the principal object of the voyage, is shown by the inclusion amongst the stores of 'Copper plaques with the Royal Arms for taking possession in the name of His Majesty'.<sup>1</sup>

Sartine at once took Latouche's proposal under advisement, and on 4 November 1774 submitted it for examination to a committee which consisted of Bougainville, Chabert, Joannis, Rosnevet, Fleurieu and Marguery. He took a broad view<sup>2</sup> and asked their opinion not only as to its value to France, but also as to its value to Science and Commerce generally. The committee was composed of men well fitted to judge of the utility of the proposed voyage, though it was perhaps a little unfortunate, from Latouche's point of view, that he had spoken so disparagingly of French efforts in the field of discovery, in a proposal which was to be considered by Bougainville and Rosnevet.

It was unnecessary, however, for personal feelings to play any part in the weighing of the merits of the scheme. It had a serious, indeed a glaring, defect, which, if Latouche had been acquainted with the accounts of the recent voyages of his compatriots, he would himself have appreciated. Bougainville, who had studied Marion's Journal with care, and who wrote the report of the committee, at once put his finger on it. The main purpose of the expedition was the discovery and exploration of the south coast of New Holland. There was no need to sail round Cape Horn and cross the whole breadth of the Pacific Ocean in the hope, which might be frustrated, of reaching after many months this scene of operations. It was apparent from the voyage of Marion, as it had been from the voyage of Tasman, that the place could be reached from the Isle de France in one-tenth of the time which Latouche proposed to spend in the attempt.

The instructions to Bougainville for his own voyage of 1766–69 had suffered from this very defect. He had been ordered to sail from the Falkland Islands across the Pacific to China and to examine the Terre du Saint Esprit and New Guinea on the way.<sup>3</sup> The crossing of the Pacific had so exhausted his provisions and so worn out his rigging and his crews that to have stopped for even a week to examine these lands when he at last

<sup>1</sup> Hamy, *loc. cit.* p. 217.

<sup>2</sup> As might have been expected of the man who later made it his business to see that all French ships of war received orders that, if war broke out with Great Britain, they were to refrain from any act of hostility against Cook and to treat him as a friendly neutral.

<sup>3</sup> Bib. Nat. Paris, MSS. Nouv. Acq. Fr. No. 9407.

reached them might have meant disaster. Even though Van Diemens Land might have afforded him nothing, he would still have had a better chance of reaching the Terre du Saint Esprit and New Guinea in a state to carry out the work required of him if he had gone via the Isle de France and south-about New Holland.<sup>1</sup> A voyage merely for the purpose of circling the globe made no appeal to Bougainville: he knew how small its value and how great its cost could be.

Three weeks after the matter had been laid before it, the committee reported that even if discoveries were made in the South Sea they would never repay the cost of setting out the expedition. As to the exploration in 'Indian seas', in which Bougainville considered the south-west coast of New Holland to lie, its proper objective was, in the committee's opinion, some place where masts and other useful things which had to be sent out from Europe could be obtained. We may be certain that Joannis, who had several times striven to refit a battered ship of Comte d'Ache's squadron at the Isle de France, heartily concurred on this point.

Whether the south coast of New Holland could furnish what was required was unknown, but the committee believed that to send an expedition all the way from France to find this out would be waste of money. All that was necessary was to instruct the Administrator of the Isle de France to despatch thither a medium-sized flute, which, if what was sought could not be obtained there, could then go on to New Zealand. Marion had found suitable timber at the latter place.<sup>2</sup> It was not suggested that Van Diemens Land should be visited again. Marion had searched the vicinity of Frederick Henry Bay for spars without finding a single suitable tree.<sup>3</sup>

The members of the committee who made the report were unanimously of the opinion that the execution of the project 'would not produce any advantage to the State, to Commerce, or to Geography'. The proposal in the form in which it had been made was accordingly disapproved, and the *Aurore* was ordered upon another service.

Sartine did not wholly reject Latouche's offer to undertake exploration, and held out to him the hope that when it was thought advisable to send a new expedition into the Pacific he would be given the command of it. In the meanwhile he was brought to the King's notice, promoted to the rank of lieutenant de vaisseau, and appointed to the command of the frigate *Rossignol*.

<sup>1</sup> This route for reaching the Terre du Saint Esprit had been suggested by Bouvet and others ('Troisième Mémoire sur la découverte', *Service Hydrogr. de la Marine*, MSS. Vol. 1053, No. 18).

<sup>2</sup> Hamy, *loc. cit.* p. 218.

<sup>3</sup> Relation of Du Clesmeur, *Bib. Nat. Paris*, MSS. *Nouv. Acq. Fr.* No. 9437.

He had learned, no doubt as a result of the report of the committee, the necessity for knowing better what had been accomplished by others in the field of exploration before entering it himself, and he now set about improving his knowledge of the subject.

At the end of July 1775 Cook returned to England. As soon as Latouche learned of his return he wrote him a letter of congratulation on the honour which he had acquired by his two voyages, and Cook replied from London on 6 September 1775<sup>1</sup>.

After apologizing for the delay, he told his congratulator that he would not have been satisfied with the applause of his own countrymen alone, as it was not for them alone that he had laboured, but for all Europe. He added that if his conduct met with the approval of the French, that of others would be surplusage. The French had contributed not a little to the exploration of the South Sea, and he regretted that Latouche had missed his part in it, because it was only from men of an enterprising spirit such as his that great achievements there were to be expected. 'Those who merely carry out their orders', he wrote, 'will never cut great figures as discoverers.'

These remarkable words, in which Cook gives at least one-half of the key to his own success, were taken by Hamy<sup>2</sup> to be a hit at Bougainville. This can hardly be the case; Cook was hardly likely to have known what Bougainville's orders had been, and if he had, he must have recognized that in carrying them out Bougainville had displayed in a high degree that enterprising spirit which he commended.<sup>3</sup>

Cook concluded his letter by inviting Latouche to continue the correspondence. Armed with it, Latouche, on 14 October 1775, again approached Sartine asking permission to reply to Cook and urging the Minister to bring the matter of the voyage to the Pacific, in which he was to command, once more before the King.<sup>4</sup> He received the permission which he sought, but his voyage of exploration was still deferred. He was ordered to sail for America, but was led to hope that on his return thence he might be sent to the Pacific.<sup>5</sup>

He wrote again to Cook on 7 November asking for his advice regarding the intended Pacific voyage. Cook's reply was delayed for some three

<sup>1</sup> Appendix A.

<sup>2</sup> Hamy, *loc. cit.* p. 207.

<sup>3</sup> Bougainville's decision to sail westward from the Great Cyclades, was, considering the state of his ships and crews, and his belief that there was a passage between New Guinea and New Holland, enterprising to the verge of recklessness. It has frequently been stated that Bougainville believed that such a passage 'probably' existed. What he wrote (*Voyage autour du Monde* (1771), p. 259) was 'Rien n'étoit, à la vérité, plus problématique que l'existence de ce Passage'. Forster (London edn., p. 307) translated 'problématique' as 'probable'.

<sup>4</sup> Bib. Nat. Paris, MSS. Nouv. Acq. Fr. No. 9439.

<sup>5</sup> Latouche to the Princesse de Rohan, 5 December 1775. *Ibid.*

months, as Latouche's letter arrived at the time when matters in connexion with the intended new British voyage to the Pacific were coming to a head, which probably made it necessary for him to ascertain from the Admiralty how much he was at liberty to disclose with regard to his last voyage and to British intentions for the future. He wrote at last from London on 10 February 1776.

Although no copy of Latouche's letter to Cook has survived, it is apparent from the reply that the visit to the south coast of New Holland, and consequently the taking possession of it, was still in his contemplation and that he expected soon to be sent on a voyage which would include those objects.

Cook stated that he was himself about to set out on a third voyage in the Pacific and assured Latouche that there would be plenty there to occupy them both. As to the parts on which further effort might usefully be spent he recommended, if the approach were made by way of America, the band between 10° N. and 10° S., particularly the lands discovered by Bougainville and Surville to the south-eastwards of New Guinea. Cook had not recognized the fact, which Buache established some years later,<sup>1</sup> that these lands were in fact Mendaña's Islands of Solomon and he held out the hope that in this crossing of the Pacific the position of Mendaña's long-lost islands might be established. If the approach were made by way of the Cape of Good Hope, then, after visiting the south coast of New Holland, the Pacific could be crossed to Tahiti and recrossed on the way home, in the virtually unexplored band between 30° S. and 25° S. or lower. Cook enclosed a short account of his own last voyage which had still not been made public.

A translation of Cook's letter to Latouche<sup>2</sup> and of his account of his second voyage in due course reached the Minister through the Princesse de Rohan, but it did not remove the obstacles in Latouche's way: he was not destined to become a great explorer. Fame called him elsewhere. The war between England and her revolted colonies in America was already in progress; France was giving secret assistance to the rebels, and in 1778 she was forced to join openly in the war.

As capitaine de frégate, to which rank he was promoted in 1780, Latouche played a notable part in the naval operations off the coast of America. In the frigate *Hermione* he fought in the battle of Chesapeake Bay on 16 May 1781, after which he sailed in her under the command of Jean Galoup de Lapérouse in the *Astrée*, on an operation which resulted

<sup>1</sup> In his *Mémoire sur l'existence et la position des Iles de Salomon*, presented to the Académie des Sciences on 9 January 1781. An extract of it is given in Fleurieu, *Découvertes des François en 1768 et 1769 dans le sud-est de la Nouvelle Guinée* (Paris, 1790).

<sup>2</sup> Appendix B.

in the British frigate *Charleston* being severely damaged and the escort vessel *Jack* taken. Latouche was wounded in the action.

He had already been decorated with the Cross of St Louis, 'bellicae virtutis praemium', and was soon appointed to the command of the frigate *Aigle* of 1000 tons, reputed to be one of the finest in the French navy at the time. In her, in September 1782, with the frigate *Gloire* in company, he fell in with the former French ship-of-the-line *Hector*, damaged and taken in the recent battle of The Saints-Dominica, and being sailed by her prize-crew to a British port. Although unable to retake her, Latouche and his consort so battered her that she sank soon afterwards.

A few days later he took the British gun-brig *Racoone*, but was chased by a superior British squadron and forced to run into the Delaware River. His enemies followed him in, and he ran aground. After attempting to scuttle his ship, he was compelled to surrender, and was sent a prisoner to England.

When he returned to France, Sartine had fallen from office and the Maréchal de Castries was Minister of Marine in his place, though Fleurieu continued to exercise influence in the department on all matters relating to discovery. Early in 1785 Fleurieu brought forward a plan for a new voyage in the Pacific far more extensive than that which Latouche had proposed, and involving explorations in both the north and the south of that ocean, and also on the north and west, as well as the south, coasts of New Holland.<sup>1</sup> The command of this voyage was not conferred on Latouche, but on Lapérouse, who accepted it with some show of reluctance. All his inclinations, the latter told Castries, were towards the military side of his profession, he was 'more ambitious of the glory of Suffren than of that of Cook'. Nevertheless, out of what he described as the almost religious respect which he had for the wishes of his superior, he entered eagerly on what he called 'this new career opened to my zeal'.<sup>2</sup>

Latouche's ardour for exploration seems to have cooled. Perhaps his sufferings in the war had unfitted him for the long and arduous expedition now proposed, which was to take four years, of which three and a half were to be spent under sail. At any rate he does not seem to have been aggrieved by the appointment of Lapérouse, who wrote to him from Monterey in

<sup>1</sup> The exploration of 'la nouvelle Hollande dans la partie qui n'a pas été reconnue' was included by Lapérouse amongst the main objects of the voyage. Lapérouse to Fleurieu, 29 March 1785. *Service Hydrogr. de la Marine, MSS. Expéd. Lapérouse*, Vol. 105, No. 2.

<sup>2</sup> Lapérouse to Castries, 9 February [1785]. *Service Hydrogr. de la Marine, MSS. Vol. 105, No. 2.* Lapérouse recognized, however, that this ambition was misdirected: 'Chaque bataille gagnée', he wrote in the same letter, 'fait presque oubliée celle qui la précède, mais les succès de Cook vivront d'âge en âge dans la mémoire des hommes.'

'Caliphornia' in the terms of closest friendship, and to whose protection he entrusted a young protégé for the voyage.<sup>1</sup>

Latouche remained ashore, holding the appointments first of Director of Ports and later of Chancellor to the Duc d'Orléans. He went as a deputy to the States General, but during the Terror he was degraded and imprisoned as a Royalist. The Consulate brought a change of fortune; he was restored to the service, made a Rear-Admiral, and appointed to the command at Brest and then, in 1801, at Boulogne. There he trained the fleet assembled for the invasion of England and repulsed the attack of Nelson on the port.

After that, he was given the command at Toulon. Nelson said that he was sent there 'on purpose, as he beat me at Boulogne, to beat me again.' He died in 1804, Vice-Admiral commanding there, and his body was entombed on a point of Cape Sepet from which he had been accustomed to observe the movements of the British Fleet.

Although Latouche never visited the coast which he aimed to annex, he was commemorated there on the maps resulting from the expedition of Baudin, who visited it in 1802. On these, his name of Tréville was given to a bay just to the eastward of the farthest Dutch discovery. Unfortunately, Baudin was unable to survey this coast very closely, and his chart of it bears no great resemblance to the actuality. When a truer outline was adopted the name Baye Tréville was omitted. The part of the coast to which the French intended to apply it may be identified with reasonable certainty as the incurving of the shore-line between the western end of Eyre Island and Smoky Bay Hill. Flinders, who charted the coast there shortly before Baudin, did not delineate it any better and gave the place no name. It is still unnamed on the Admiralty Chart.

<sup>1</sup> *Bib. Nat. Paris, MSS. Nouv. Acq. Fr. No. 9424.* Here printed as Appendix C.

## APPENDIX A

### COOK TO LATOUCHE, 6 SEPTEMBER 1775

(*Bibliothèque Nationale, MSS. Nouv. Acq. Fr. No. 9439; Hel. Trans., Bib. Nat. Vol. II, p. 348; Hamy, loc. cit. p. 207.*)

Monsieur,

Je n'ai reçu la lettre très obligeante que vous m'avez fait l'honneur de m'écrire que bien après sa datte, ce qui sans doute n'est arrivé que par une erreur fort étrange de la part du maître de poste. Ce qui a encore retardé ma réponse est que, comme je ne suis pas absolument maître de la langue françoise, j'ai été obligé de la mettre aux mains d'un ami pour me la traduire, ce qui m'a privé jusqu'à présent de vous faire mes très humbles remercimens du grand compliment que vous avez eu la bonté de me faire sur mes deux voyages, aussi tôt que j'aurois bien voulu.

Il ne me suffit donc point d'avoir les applaudissemens de ma nation seule, parce que ce n'est pas pour elle que j'ai travaillé en particulier, mais pour toute l'Europe. Et si ma conduite a l'approbation de la nation françoise, je ne dois point m'embarrasser des autres.

Votre nation, Monsieur, n'a pas peu contribué aux découvertes de la mer du Sud. Et nous avons bien raison de regretter que vous en ayez été privé de votre part, parce que ce n'est que par des hommes d'un génie aussi entreprenant que le vôtre que nous devons attendre de grandes choses de ce côté-là. Car je soutiens que celui qui ne fait qu'exécuter des ordres ne fera jamais grandes figures dans les découvertes.

Il y a encore bien des parties dans l'océan Pacifique qui ne sont point découvertes, et il seroit à souhaiter que vous fussiez un jour ou l'autre employé à ce service-là que vous avez tant à cœur. Et si un pareil événement arrivoit, vous pouvez me demander tout ce qui dépend de moi à ce sujet. Et en même tems, s'il y a quelque chose en particulier dont vous ayez envie de vous informer concernant mon dernier voyage, je vous le communiquerai très volontiers, comme il sera exposé au public, aussi tôt que les estampes qui doivent l'accompagner seront gravées.

Il faut avant que je conclue que je vous dise que toutes les envies qu'on avait de trouver un continent dans la Mer du Sud sont toutes évanouies, c'est-à-dire dans une latitude où la mer est navigable, car depuis le 60° et plus la mer du Sud est si parsemée de glaces de toutes espèces qu'on n'y navigue qu'avec beaucoup de danger.

Il ne m'a pas été possible d'aller plus loin que le 71° 10. J'ai pourtant trouvé terre au 59° et sous le 27° méridien Ouest de Greenwich ou Londres, mais je n'ai jamais pu déterminer si c'étoit un groupe d'îles ou une partie d'une grande terre s'étendant dans le Sud. Ceci a été la seule terre que j'aie trouvée dans le Sud, excepté celle qui est déjà connue. Je me flatte que vous voudrez bien continuer la correspondance dont vous m'avez honoré et je suis avec toute vérité, Monsieur,

Votre<sup>1</sup> très obligé et fidèle serviteur,

James Cook

Mile End, London, 6th September 1775.

<sup>1</sup> The formal ending only is in Cook's holograph.

## APPENDIX B

COOK TO LATOUCHE, 10 FEBRUARY 1776

(Bibliothèque Nationale, Paris, MSS. Nouv. Acq. Fr. No. 9439; Hel. Trans., Bib. Nat.  
Vol. II, p. 351.)

Londres 10 février 1776

Mon cher Monsieur,

J'aurais répondu sur le champ à votre obligeant lettre du 7 novembre dernier, si je n'avois pas toujours attendu que je fusse vous informer de ma nouvelle entreprise d'un troisième voyage sur l'Océan Pacifique; cette affaire n'a été décidée que d'aujourd'hui et je mettrai à la voile avec deux vaisseaux, vers la fin d'avril. Le premier objet de ce voyage est de reconduire Omaï dans son île. On n'a point encore déterminé les autres, mais ils se rapporteront certainement aux progrès de la géographie et de la navigation: je serais fort aise de pouvoir vous rencontrer employé ainsi que moi dans une expédition aussi intéressante, d'autant que vous me paroissés avoir quelque espérance d'en être chargé et je souhaite que vous réussissiez, puis qu'il y a bien de quoi nous occuper tous deux.

Je vous donnerai, sans aucune réserve, mon avis sur la route à préférer pour achever les découvertes qui restent à faire dans l'hémisphère méridional.

Vos motifs pour continuer ce grand objet ne se peuvent pas être contestés. Il est certainement à désirer qu'on visite la partie méridionale de la Nouvelle-Hollande, continent dont je ne doute pas que la Terre de Diemen ne fasse partie, me fondant sur ce que le Capitaine Furneaux en a vu.

Vous ne trouverez ces terres à mon avis qu'autant que vous suivrez la route convenable. Si vous entrerez dans l'Océan Pacifique par le cap Horn, je vous conseille de gagner le 5° degré de latitude méridionale et de traverser une grande partie de l'Océan dans cette latitude; car la partie de cette mer qui se trouve entre le 10° degré de latitude méridionale est fort peu connue, et il est très probable que cette partie contient plusieurs grandes îles. Le navigateur qui visitera cette mer, en suivant

cette route, pourra mouiller aux îles Marquesas où il trouvera de bonnes provisions de toute espèce, et un peuple civil et hospitalier. Je crois qu'il serait à propos d'examiner avec plus d'exactitude la terre qui a été découverte par Mrs. Surville et Bougainville. Je parle des terres qui touchent la Nouvelle Guinée. Il est à présumer qu'elles peuvent produire des épices ou quelque article précieux pour le commerce.

Après avoir pénétré aussi avant, il sera impossible de reconnaître la Terre de Diemen, mais il sera peut-être nécessaire de toucher aux îles de la Sonde.

Si vous entrés dans l'Océan Pacifique par une route de l'Est ou si vous prenés votre point de départ au Cap de Bonne-Espérance ou de l'île de France, votre premier objet doit être de visiter la côte méridionale de la Nouvelle-Hollande; ce qu'il faut faire au milieu de l'été, et ce sera l'hiver que vous irés à Otahiti ou aux Marquesas, lorsque les vents d'Ouest règnent le plus, on devrait faire ce passage par la partie de cette mer qui n'a point encor été visitée et qui est située entre les parallèles 30 et 25 Sud, ou même plus bas, si les vents le permettoient, après avoir pris des provisions à Otahiti ou aux Marquesas, mais plus vous irés vers l'Est et mieux ce sera.

La première opération qu'il y aurait à faire ensuite, ce serait de poursuivre la route ci-dessus tracé et de revenir à l'île de France par les îles de la Sonde.

Les géographes aussi bien que les navigateurs diffèrent d'opinions sur la situation des îles nommées de Salomon. La route que j'ai marquée éclaircira ce point. Si ces idées vous sont de quelque usage pour le voïage que vous avés tant à cœur de faire, je serai charmé de vous les avoir communiquées. Je ne finirai point sans vous exprimer le désir que j'ai de savoir si vos sollicitations auront eu du succès avant que je quitte l'Angleterre.

Je suis, avec autant d'estime que de sincérité, mon cher monsieur,

Votre très humble et très obéissant serviteur,

James Cook

Londres, Mile End, 10 février 1776

P.S. Comme je vois qu'il est trop tard pour profiter de la poste d'aujourd'hui, je vais vous donner une esquisse de mon dernier voyage. Je suis parti du cap de Bonne-Espérance, le 22 Novembre 1772. J'ai gouverné au Sud par la latitude de 51 degrés où nous encontrâmes les premières glaces. Quand nous fûmes à 55 degrés de latitude et 22 degrés Est de longitude de Greenwich, nous trouvâmes une très grande mer.

Après y avoir été quelque temps je pris le Sud et ensuite je gouvernai vers l'Est jusqu'au méridien du Cap de la Circoncision par la latitude de 59 degrés. Ne voyant aucun signe de terre, je m'en éloignai en prenant le Sud-Est et traversant le cercle antarctique et le méridien de 39 degrés Est par 67 degrés 15 minutes de latitude, où nous sommes arrêtés par un mur de glace que je n'entrepris point de traverser. Je pris du coté du Nord, pour chercher la terre découverte par M. Kerguelen, découverte dont l'on m'avoit informée au Cap de Bonne-Espérance. Je la cherchai en vain entre les 48 et 49 degrés de latitude et entre les 57 et 62 degrés de longitude Est. Je jugeai que je l'avais laissée à l'Ouest de ces méridiens et que les vents très-forts qui venaient de l'Ouest m'en éloignoient. Ici, les deux vaisseaux furent séparés, je continuai ma route avec le vaisseau la Résolution, vers le S.E. à la latitude de 61 et au delà. Je gouvernai toujours à l'Est entre cette latitude et 58 degrés, toujours entre les îles de glace, et sans voir le moindre signe de terre. Après avoir passé le méridien de la Terre de Diemen je pris vers le Nord, et le 26 Mars 1773 je jettai l'ancre dans la Baye de Duskey au Sud-Ouest des côtes de la Nouvelle-Zélande, où je trouvai du bois et de l'eau en abondance, d'excellent poisson et de la volaille sauvage. De là je fis voile pour la rade de la Reine Charlotte, où je rencontrais le capitaine Furneaux.

Après qu'il m'eut quitté, il fit directement route pour la terre de Diemen où il toucha et fit du bois et de l'eau. Ensuite il côtoia les côtes du Sud et celles de l'Est jusqu'à 40 degrés. Je quittai la rade de la Reine Charlotte avec les deux vaisseaux le 7 juin, et je gouvernai à l'Est par la latitude de 41 et 47 degrés et par la longitude de 134 degrés Ouest de Greenwich. Je tournai alors vers le Nord au 18<sup>e</sup> degré pour gagner Otahiti, où nous arrivâmes le 18 Aout. Il y a quelques basses îles entre les 17 et 18<sup>e</sup> degrés et c'est tout ce que nous avons vu de terre dans ce passage. Je passai un mois tant aux îles d'Otahiti qu'à celles de la Société et ensuite je gouvernai pour les îles de

Middelbourg et d'Amsterdam, je ne découvris dans cette route qu'une petite île. Je touchai ensuite à l'une et à l'autre des îles ci-dessus nommées. J'achetai dans l'île d'Amsterdam des cochons, des volailles et beaucoup de fruit. Ces habitans sont aussi humains que ceux d'Otaïti, mais aussi grands voleurs.

Je partis d'Amsterdam le 7 Octobre et je fis route pour la Nouvelle-Zélande sur les côtes de laquelle nous nous séparâmes tout à fait. Le 3 novembre j'entrai dans la rade de la Reine Charlotte où je restai jusqu'au 26 que je remis en mer. Je gouvernai alors au S.S.E. jusqu'à la latitude de 66 où je m'arrêtai, ne pouvant aller plus loin à cause de la glace. Je tournai après cela vers l'Est entre les 64 et 67 degrés de latitude, les glaces ne nous ayant permis d'arriver que jusque là. Je me fis alors une pointe vers le Nord jusqu'aux 47 degrés, après quoi je revins encore vers le sud jusqu'à 71 degrés 10 minutes qui est la plus haute latitude à laquelle j'ai été et à laquelle je crois qu'on pût aller.

Nous étions par la longitude de 106 degrés et demi à l'Ouest de Greenwich. Ici nous rencontrâmes une muraille de glace et des montagnes de glace dont le sommet se perdoit dans les nuages. De là je gouvernai au Nord et je visitai les îles d'Easter (de Pâques) qui sont par la latitude méridionale de 27° 16' et par la longitude de 110 degrés 10 minutes. Les habitans de ces îles sont bonnes gens mais grands voleurs, c'est une nation de l'espèce de celle d'Otaïti, ces îles n'ont ni port ni bois ni eau fraîche propre à embarquer. Elles produisent des cannes de sucre, du plantain et des patates. J'y fis peu de séjour et je gouvernai pour les îles Marquises, où j'arrivai le 7 Avril 1774. Depuis mon dernier départ de la Nouvelle-Zélande jusqu'à mon arrivée dans ces îles, je n'ai découvert absolument aucune terre nouvelle, et je n'en ai pas vu la moindre apparence.

Nous trouvâmes dans les îles Marquises des fruits en abondance et quelques porcs. De là nous partîmes pour Otaïti et dans notre route nous découvrîmes quelques îles basses. On me reçut très bien à Otaïti, et aux îles de la Société. Je passai six semaines parmi ces peuples. Je fus ensuite à Rotterdam d'où je gouvernai pour les grandes Cyclades que j'appelle les Nouvelles Hébrides. Ce groupe d'îles s'étend depuis le 14 degré et demi de latitude méridionale jusqu'au 20°. Elles sont habitées par deux ou trois nations différentes qui toutes sont aussi des voleurs. Les productions de ces îles sont à peu près les mêmes qu'à Otaïti. Au sud des Hébrides je trouvai un grand pays dont les habitans étaient fort humains. Il est situé entre le 19° degré et le 22° et demi et s'étend jusqu'à 80 ou 90 lieues S.S.E. et N.N.O. Sa largeur n'est pas considérable, n'excédant pas 10 à 12 lieues.

Après avoir quitté ces îles, je visitai encore la Nouvelle Zélande d'où je pris directement mon cours pour le Cap Horn. Mais il faut que je finisse ici, n'ayant plus ni de tems ni de place pour continuer.

*Endorsed:* Lettre de M. Cook traduite le 16 Mars  
pour la marine.

#### APPENDIX C

LAPÉROUSE TO LATOUCHE, 19 SEPTEMBER 1786

(*Bibliothèque Nationale, Paris, MSS. Nouv. Acq. Fr. No. 9424; Hel. Trans., Lapérouse, p. 518.*)

Tu auras lu avec bien de la douleur mon cher ami, les détails des malheurs qui nous sont arrivés. Toutes les précautions que j'avois prises n'ont pu nous en garantir et une fatalité inévitable devoit nous faire payer en une seule minute tous les événements heureux de cette campagne, car en vérité il est sans exemple d'avoir fait un aussi énorme voyage sans un seul malade sans aucune avarie, et avec toutes les autres circonstances les plus désirables dans une longue navigation. Quoique nous n'ayons que glané après le Capitaine Cook notre relation sera très intéressante. Il s'en fallait de beaucoup qu'il n'ait tout veu sur la côte de l'Amérique et d'autres pourront encore voir après nous, car les détails de cette partie du monde sont infinis.

Je t'ai fait présent d'une superbe baye qui portera à jamais ton nom et à Fleurieu d'un cap qui fera époque dans la géographie, je n'ai donné que le nom de mes amis à nos découvertes ou celui de quelques ministres disgraciés comme M. de Sartine et M. Necker.

Les noms de M. de Castries et de la famille royale sont réservés pour la côte de Tartarie qui est la partie absolument neuve de notre campagne et très certainement la plus difficile. Je crois pouvoir vous assurer que si nous finissons notre voyage comme nous l'avons commencé, on sera content de nous.

Adieu, mon cher, je t'embrasse de tout mon cœur. Colinet se porte au mieux, je lui ai donné un ordre pour faire fonction de capitaine de brûlot afin qu'il ne soit pas commandé par les nouveaux enseignes. Je suis très content de lui et on ne peut mieux servir.

Je te recommande, mon cher ami, mes intérêts et ceux de mon neveu qui est élève commissaire à Brest, de la façon de M. le duc de Castries. J'espère que je le trouverai commissaire à mon retour. Tu sais qu'il s'appelle M. de la Bessière.

Adieu encore une fois, et pour trois ans.

à Monterey dans la Californie septentrionale.

le 19 <sup>bre</sup> 1786

Je serai au Kamchatka dans les premiers jours d'Aoust de 1787:

A Monsieur Monsieur (*sic*) de la Touche

Capitaine des Vaisseaux du Roi, directeur  
des Ports à la Cour. A la Cour.

## SIX CRAFT OF KWANGTUNG

By G. R. G. Worcester

KWANGTUNG, with an area of 100,000 square miles and a population of 32 million inhabitants, is the most southerly of the provinces of China. For the most part it is a mountainous region, except in the delta area; and here it has unparalleled facilities for inland navigation penetrating into the remote interior by means of its three remarkable rivers and their feeders, which converge and pour their waters



Fig. 1. Sketch map of Kwangtung.

into the sea through countless channels in the alluvial plain at the head of which stands Canton, the capital. Kwangtung has, moreover, a deeply indented coastline, 800 miles long; and of all the provinces in China it is the best provided with excellent bays and ports. These happy navigational benefits have bred a hardy type of seaman, whose knowledge is the outcome of generations of experience.

The delta of the Si Kiang is very fertile, matting, sugar cane, bamboo, inlaid ware, wheat, tea, ivory carvings, tobacco, groundnuts, silk, ginger

and oranges being the chief products; there are extensive coal fields, and the delta is at the heart of the rice country.

Although pelagic fishing plays a major role in the coastal economy of Kwangtung, especially off the mouths of the delta and in Kwangchow Bay, it has not developed to the same extent as the Chusan area owing to the warmer water. According to Chinese Customs records the fishing population amounts to 560,000 souls.

As a means of transportation the Si Kiang is navigable by junks all the way to the borders of Yunnan. Except for rice, fish and sweet potatoes, most of the products pass through Wuchow on the way to other ports of China or abroad. Such valuable minerals as tungsten, manganese, tin, antimony and bismuth are carried down river, while large lumber rafts float down the various waterways to be used in Canton or Hong Kong.

There is a saying that 'everything new originates in Kwangtung'. This is largely true. It is also a fact that the province is probably the most conservative in the whole of China; there are, for example, numerous instances of general manners and customs, each connecting present-day life with that of centuries ago. In respect of its boats, too, this province is a curious and most interesting mixture of things old and new. In spite of the modern maritime activity which has grown up within the last decade, the ships and boats to-day still attract attention to her ancient historical background. Kwangtung is a veritable paradise for the student of nautical research.

The purpose of this article is to show the genius of the Chinese for being able to build and operate boats suitable to their needs and to the conditions obtaining. From a vast number of different types I have selected six typical of widely separated regions of the province.

### (I) THE SEA-GOING JUNK OF HAINAN<sup>1</sup>

The period during which the T'ang Dynasty ruled in China, extending over nearly three centuries from A.D. 618 to 907, is one of the most interesting in China's history. It was probably in this dynasty that China first became sea-minded; and from then on, until about 400 years ago, she probably led the world in ocean shipping, with well-found, sea-worthy craft fitted with many nautical devices quite unknown in Europe at that time. They were large ships, too, and some of them carried 1000 passengers and crew. We have it, however, on the authority of Marco Polo that in the case of the ship he travelled in nearly all on board died on the voyage; so the service cannot have been particularly good.

<sup>1</sup> There is a model of this junk in the Maze Collection at the Science Museum, South Kensington.

The ingrained human instinct to trade soon attracted the early commercial Arab navigators, who made regular voyages to Canton, also the Indians, Persians and Jews; and so by A.D. 800 trade was so well established at Canton that a central inspectorate of maritime trade was established to

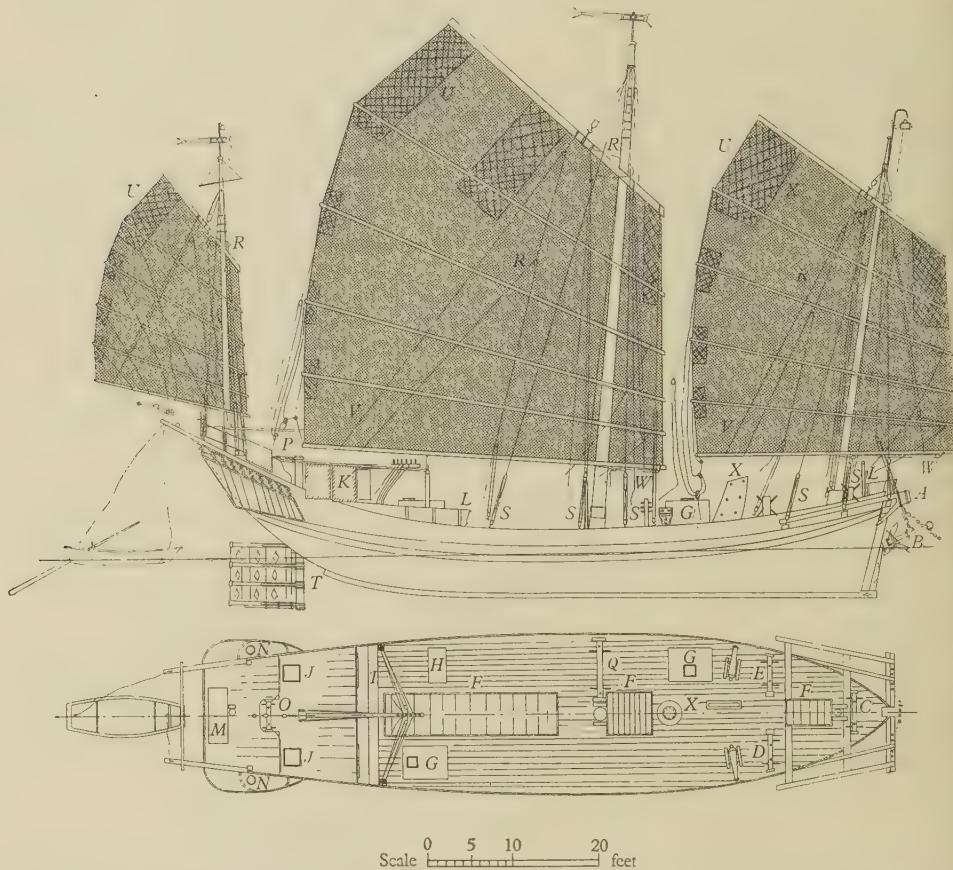


Fig. 2. The Hainan Trader. *A*, wooden anchor; *B*, foreign type anchor; *C*, Foresail halliard windlass; *D*, wooden anchor windlass; *E*, foreign anchor windlass; *F*, hatch; *G*, Fresh water tanks; *H*, galley; *I*, gangway for helmsman; *J*, hatch to cabins below; *K*, bullet proof shields; *L*, portable bulwarks; *M*, shrine; *N*, W.C.; *O*, rudder windlass; *P*, rudder retaining tackle; *Q*, main halliard windlass; *R*, topping lifts (standing parts aloft); *S*, shrouds; *T*, after end of keel; *U*, chafing gear; *V*, thimble and hooks; *W*, Boom truss; *X*, centre board and trunkway.

deal with the numerous foreign merchants and traders. The inevitable result of such communication with the outside world was to introduce new ways of thought into China. It had also the effect of carrying various Chinese maritime inventions into Europe. The Western world, therefore,

probably through the medium of the Arabs, is indebted to China for the lee board, the centre board, the balanced rudder, the windlass and above all the water-tight compartment.

Historical records show that the Chinese sailed as far West as the Persian Gulf and Arabia and East to Korea and Japan. In recent times, however, their maritime activities have been confined to Far Eastern waters.

Notwithstanding the antiquity and wide scope of Chinese literature it is quite surprising that comparatively little has been written about one of her oldest and most important industries, Ocean Shipping.

It is true that we find many references in Chinese history to those ships of old, but no writer of nautical experience has described them or provided us with information on which reliance can be placed. Writers on shipping were, or appear to have been, practically unknown in those days; the few that refer to it are so inaccurate or laconic, or both, that their works have little, if any, value; and so anything relating to the early ships of China is in a great measure a matter of conjecture.

In addition to this it is an unfortunate fact that it is not customary for Chinese shipwrights to prepare plans, nor do they leave on record specifications of the vessels they construct. Indeed, in most cases, the shipwrights are entirely illiterate; they have from time immemorial worked from data passed down from father to son and from craftsman to craftsman.

Hainan Island is part of the province of Kwangtung. Here for centuries, for the most part on the east coast of the island, junks, such as that illustrated in Fig. 2, have been built, capable of making long sea voyages.

Until comparatively recent times Hainan maintained a direct shipping connexion with Malaya and Indonesia. Perhaps the most famous type of them all was the Hainan Trader.

According to the Trade Reports of the Chinese Maritime Customs there were more than 150 of these vessels in regular service at the close of the last century. By 1907 the number had fallen to 110 and to 80 in 1936. To-day few, if any, remain.

The Hainan Traders were all large three-masted vessels, carrying mat sails. They varied greatly in size from 1500 to 3500 piculs and from about 42 ft. to 88 ft. in length. The craft illustrated in Fig. 2 measures 84 ft. o.a., with a beam of 18 ft. and a depth of  $5\frac{1}{4}$  ft. The bulwarks rise amidships to a height of  $1\frac{1}{2}$  ft. and portable wash-boards, 2 ft. high, are fitted above them. These slide between vertical posts at intervals of 3 ft. or so.

According to Sir Frederick Maze these junks used to leave China on the north-east monsoon between November and January, the majority in the last-named month. They seem seldom to have secured full cargoes when outward bound and took aboard cargoes from Hainan, cocoanuts and oil,

copra, coir rope and salt fish. They left for ports on the Indo-China coast, the Gulf of Siam, Malaya and the large islands of the Netherlands Indies.

They would trade on the coast and among the islands for a few months: and, if a homeward cargo were not obtained by the end of that time, a junk might remain abroad for one or two years, wandering wherever her cargoes might take her. The majority of the junks, however, returned to China on the succeeding south-west monsoon, reaching Hainan in early summer. They made no deep-water passage on their way home, but worked well up the coast of Annam before setting a direct course for the south coast of Hainan.

Having discharged their cargoes, the majority of the junks would be in Chinese waters until it was time to go abroad upon the next north-east monsoon. Some junks spent the intervening period in repairing or refitting.

Piracy has flourished for years in a greater or less degree in the vicinity of Hainan, and squadrons of pirate junks were accustomed, until comparatively recent times, to sail northward annually with the summer monsoon and carry out enormous depredations between the Straits of Hainan and the entrance to the Formosa Channel.

In former years trading junks travelled up the east coast of Hainan in convoys of six or seven for safety in case of attack from these pirates. In some cases they were escorted by one or more war junks; but, as the latter were unable to keep the seas clear of pirates, the various classes of junks were licensed to carry armaments for their own protection.

The Chinese sailor has always had a great predilection for piracy; and, so as to prevent these junks from themselves becoming pirates and attacking unfortified towns on the route or unarmed traders, it was provided by law that nine other vessels must become surety for each trading vessel. Should such a junk be guilty of piracy, not only were the owners and sailors of the offending junk treated as pirates, but also the owners and sailors of the vessels which were their security.

On the evidence available it cannot be asserted that these ships were the direct descendants of those mentioned in the old Chinese annals, but it can be claimed with certainty that the ocean going vessels of Hainan have been making bold overseas voyages for very many centuries.

## (2) THE TSAT PONG TOR

The early European ships trading to China were, for the most part, heavy East Indiamen and sailing ships of that type; later came the Clippers. Between these ships and certain craft of South China, particularly in the Hong Kong area, there are several striking similarities too substantial to be due to mere coincidence.

The large fishing craft of Kwangtung to-day are quite unlike any of the other fishing craft of China. They do not claim any ancient origin, as do, for example, the famous fishing junks of the Chusan archipelago or North

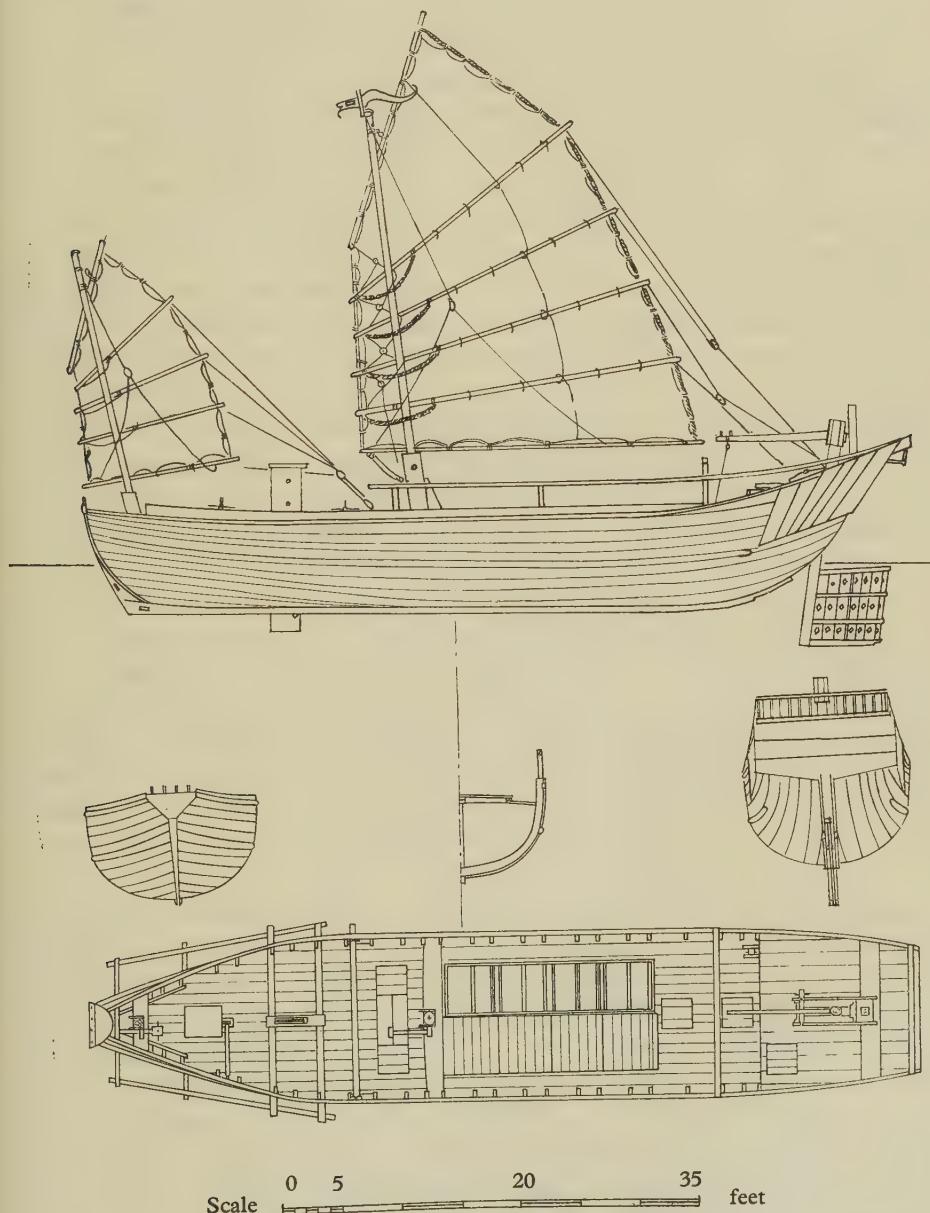


Fig. 3. The Tsat Pong Tor.

China; indeed they are comparatively modern, for they seem to have evolved little by little, in one way or another, from this contact with the West.

The seven or so types of trawler of the South China Sea are built in different ports of Kwangtung, and as a result their size and general arrangement vary somewhat. In other parts of China the boat builders are most conservative; and, although they cannot for the most part read or write, they always manage to turn out an amazingly standard type of craft. In the Kwangtung area, however, there are seldom to be found two junks even of the same type exactly alike; and they are far better built and equipped than those found in other Chinese provinces. It is said that there are, even to-day, more than 1000 large trawlers operating from different ports in Kwangtung.

Of the various types of junk trawler, both sea-going and inshore, the most important and well known type is perhaps the Tsat Pong Tor. From a nautical research point of view they are interesting as being an intermediate type between the Hong Kong trawlers and those typical of North and East China. This very easily recognizable craft is, moreover, one of the two basic types of Kwangtung fishing junk, the other being the Tong Ka, which she closely resembles. The lines above water are typically Chinese; but below the waterline they show a strong foreign influence, due largely to the introduction of imported wood such as teak or Singapore hard wood.

The Tsat Pong Tor has the typical Kwangtung bow and stern. It has a small keel and a heavy wale, which extends from the bow to a point about 5 ft. from the stern. At this point there are several vertical planks, which reach the counter; this is the distinctive mark of the Tsat Pong Tor.

An interesting feature, which is peculiar to the Tsat Pong Tor, and which is not found in any other southern type of fishing junk, except the Kwong Hoi, is the large truncated hard wood centre-board. This is situated about 8 ft. forward of the mainmast and is usually about 15 ft. or more deep by about 3 ft. at the head. It can be raised or lowered at will in the trunkway to suit sailing requirements; the trunkway is, of course, out of the median line to allow the board to come down clear of the keel. It is locked in position by the insertion of a wooden fid through various holes in the centreboard. Usually about four men are required to alter the height. Another innovation peculiar to Kwangtung is the fenestrated rudder, which has a number of rhomboidal holes cut in it from the belief that the water eddying through them, particularly at low speeds, meets with more resistance than would be encountered from a plane surface. The rudder is hoisted or lowered by means of a tackle secured to a small windlass. The weight of the rudder is taken by means of a fid passed through an aperture in the rudder.

Yet another feature, not found elsewhere in China, is the presence of standing rigging, which consists of three wire stays on either side, set up by lanyards and dead eyes (omitted in Fig. 3). The deck timbers project and support a heavy spar running from bow to stern and serving as a platform whereon to spread the shrouds.

The Tsat Pong Tor is essentially an open-sea trawler, operating a net, some 250 or more feet in length, made in the form of a long conical bag with two wings equal in length. These junks operate in pairs, two junks towing one net. The net differs mainly from the European type in the absence of otter boards.

The junk illustrated in Fig. 3 is one of the smallest variety of the type and measures 37 ft. in length with a beam of 14 ft. and a depth of 9 ft. There are four large fish holds situated amidships and abaft these the net holds. The crew of twenty to thirty, men, women and children, have fairly comfortable quarters in the after part of the junk; the single members of the crew are accommodated forward in the bow.

As is the case with practically all the sailors of Kwangtung, the fishermen are a people apart; they belong to the 'Floating Population'. These primitive folk have no home but their junk. They are generally looked upon as being socially inferior. They marry only in their own class and have their own customs and mode of life. Their manner of work and materials used are much the same as they were hundreds of years ago.

The catch consists of Chu Yü, a kind of herring, Hak Chong Yü, Black Pomfret, Cheung Lun Yü, a small variety of herring, and the Wang Fa Yü or Yellow Fish.

The fishermen of Kwangtung are a rugged and self-reliant lot. They are inured to the vagaries of wind, weather and their fellow men; and fishing to them is more than just a profession, it is a way of life.

### (3) THE LIU-P'ENG CH'UAN

The delta of the Han Kiang, in the north-east of the province, consists of an intricate maze of creeks, canals and waterways, which offer the most important means of communication in the district. This is the door to Eastern Kwangtung and the Hakka country.

The port of Swatow is situated at the mouth of the Han Kiang, the southernmost corner of the delta. It is essentially an agricultural, fishing and trading centre.

The main channel, which is about 20 miles in length, leads north-west to Chao-chow. Above this point the gradient is steep, but small flat-bottomed boats can ascend to the Kwangtung-Fukien border; there is a succession of rapids, but some boats can reach Chang Ting.

The Mei-Kiang, a tributary, enters the Han from the south-west at Sam-hop. There is a depth of  $4\frac{1}{2}$  ft. to Meihsien, above which, although obstructed by rapids, the river carries a considerable amount of shallow-draught junk traffic to the head of navigation near Hsing-ning.

This is the home of the little known Paper Boat, so called by foreigners because it is used for bringing paper and charcoal down from Chia-ying-Chow and the neighbouring districts. Its Chinese name is Liu-P'eng Ch'u'an, or Six Mat Boat; its chief characteristic is its high bow.

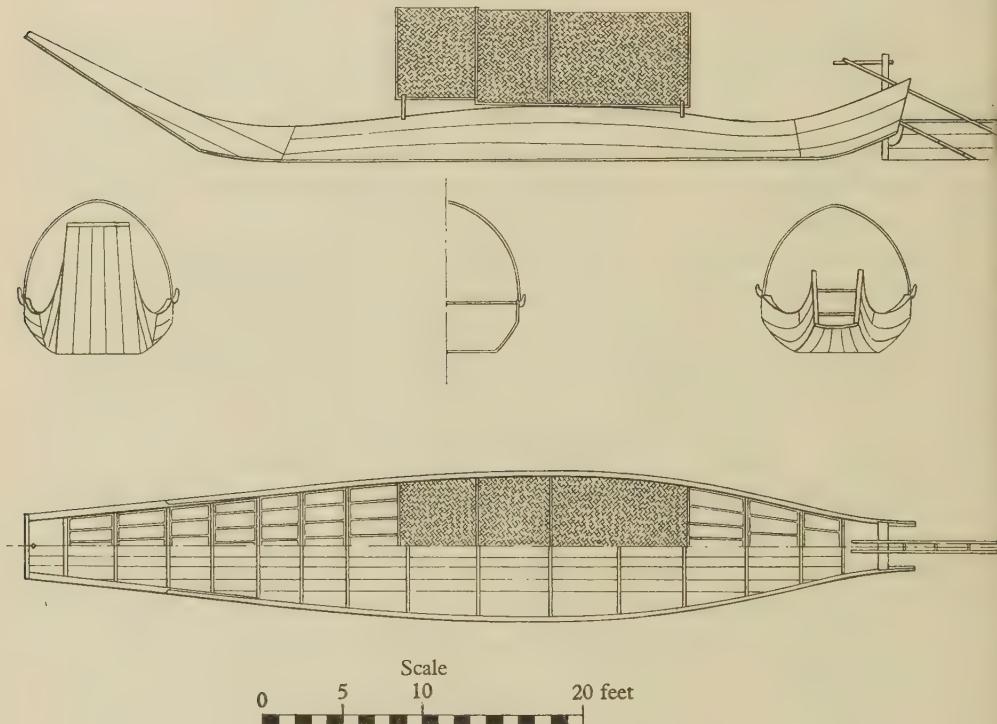


Fig. 4. The Liu-P'eng Ch'u'an

From Fig. 4 it will be seen that the junk is narrow and quite flat-bottomed; the high bow, essential for work in rapids, sheers abruptly up to a height of 10 ft. Poling is the usual method of propulsion, a great impetus being obtained by the polers, who, starting from the top of the incline with their backs to the bow, walk the length of the junk, almost head downward, putting their weight on a long pole, one end of which is shaped to fit the shoulder, while the other end terminates in a long heavy iron spike, which is dug into the shallow bottom of the stream. A deft twist at the end of the

beat releases the spiked end of the pole from the bottom, and the polers walk back to the bow to continue their task.

When the wind is fair, that is to say right astern, four or five light bamboo masts are stepped, slightly out of the vertical, and a number of primitive and most ingenious sails are set thereon. The mainsail consists of the mat-house extension lashed to the twin masts (see Fig. 5).

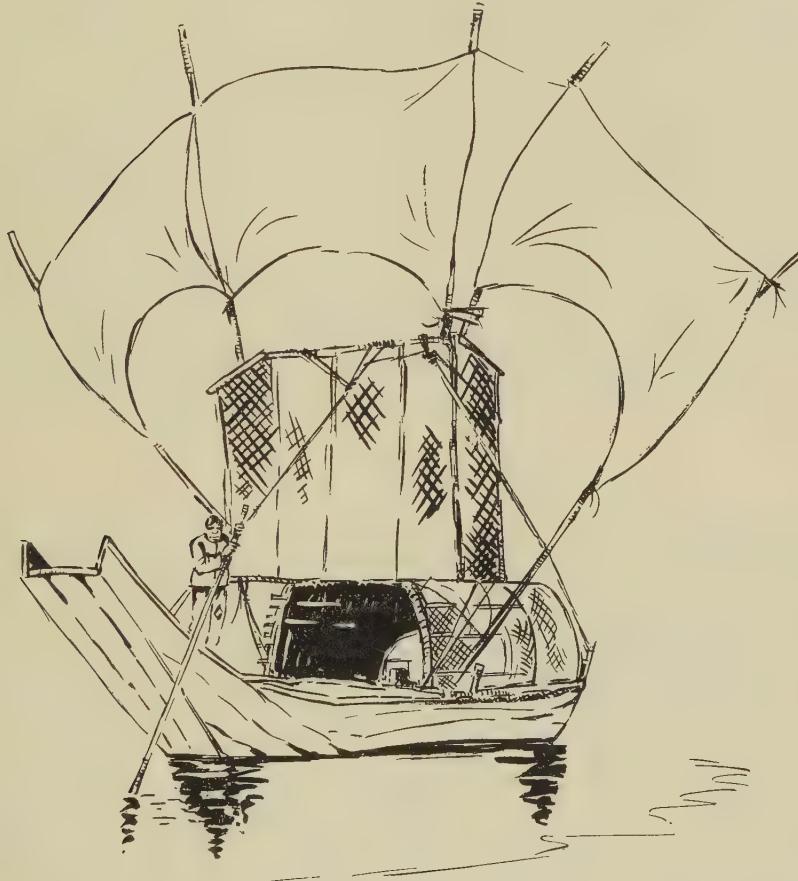


Fig. 5. Arrangement of sails.

The rudder is strengthened by a wooden cross-piece crudely nailed to the extremity, and further support is obtained from a light pole lashed to the tiller and nailed to the upper end of the after part of the rudder. This is typical Kwangtung inland-waterway practice. It is interesting to note that old Dutch paintings show practically the same practice in use in Netherlands waters. An aperture is present at the upper end of the bearding of

the rudder so as to enable the helm to be put hard over without its touching any part of the gudgeons or sockets. The rudder is retained in position by the 'open' variety gudgeon or socket.

The high house amidships, which permits of passage fore and aft outside, is divided into living quarters for the crew and a galley aft. At night the fore-deck is matted in. For this purpose one large overall section and a number of smaller mats are provided and, when not in use, or required as sails, are stowed in piles on the mat house.

#### (4) THE COFFIN BOAT OF THE PEARL RIVER

The essential thing about the Chinese is that, no matter what his station in life, he must be buried where his ancestors were buried, near his ancestral home.

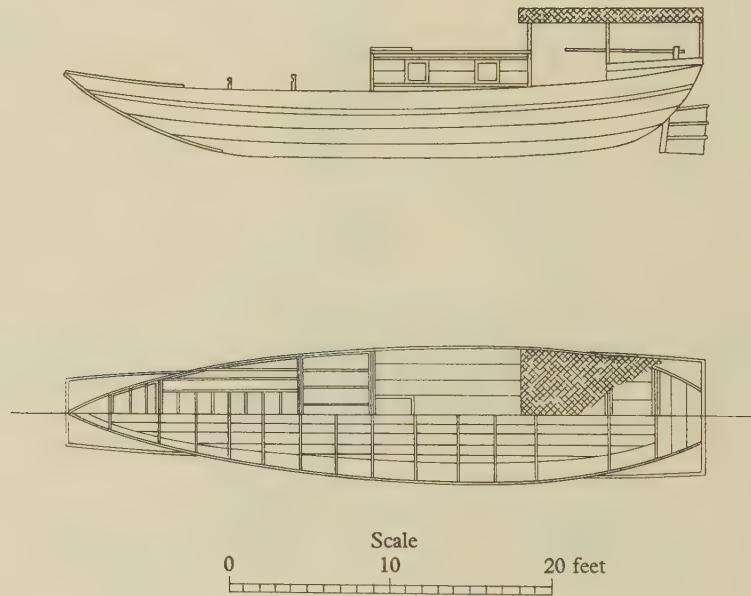


Fig. 6. The Fy t'eng.

For many reasons the body of a Chinese who dies in another district cannot always be sent back at once. Floods, civil wars, bandits and so on may delay the passage home. In any case the geomancers, if the person is rich, take a long time to settle the exact site of the grave. If the man is poor, the matter can be put through very speedily, but the richer the family the longer does it take the priests to make up their minds. And so, while waiting for passage, the coffin goes into a mortuary. Those of Shanghai and

Canton are world famous, and here may be seen literally hundreds of coffins in row upon row, all waiting to go back to their ancestral homes.

China being so well served with waterways, the coffins usually go by water transport. In other parts of China the craft used for this melancholy duty are not specially built for the task, but in aesthetic Canton this is quite different. Here is to be found a special type of junk used for the coffin-carrying trade only.

As will be seen from Fig. 6 it is constructed on slender lines and built of soft-wood with hard-wood frames. There are four bulkheads and ten frames. The planks of the fore-deck are removable to permit of the coffin being lowered into the hold. The midship compartment consists of a comfortable cabin, where the relatives of the deceased may be housed during the voyage. The boat is propelled by the crew of six oarsmen. It is not clear how the Fy t'eng, or Quick Boat, got its name. The junkmen affirm that it was originally designed as a high-speed craft and was, therefore, much in demand for carrying sick people to hospital. When, however, the motor came into general use in Canton, and the means of transport improved, the boats' mission changed from that of carrying the nearly dead to transporting the remains of those already departed.

### (5) THE SLIPPER BOAT

No inconsiderable part of the huge multitude which composes the population of Canton lives in boats. A conservative guess would put it at 100,000. Formerly there were officers appointed by the Government to regulate and control this portion of the inhabitants of the city. The whole of the Canton waterfront bristles with boats of every sort, the floating homes of this vast population, who are born, live their entire lives and die afloat.

The famous Slipper Boat of Canton (see Fig. 7) is probably the best known, and it is certainly the most characteristic, for here again is an example of comparatively recent foreign influence with, at the same time, an ancient Chinese ancestry.

Although known to foreigners as the Slipper Boat, on account of its shape, its Chinese name is Sar Teng, or Sand Boat. The junkmen affirm that it takes its name from the old custom, which still obtains, of lying on or off the mudflats of the river. The people who live in these boats also belong to the 'Floating Population' and are said to be the descendants of an aboriginal people driven before the advance of Chinese civilization and compelled to live in boats and until recently forbidden by law to live ashore.

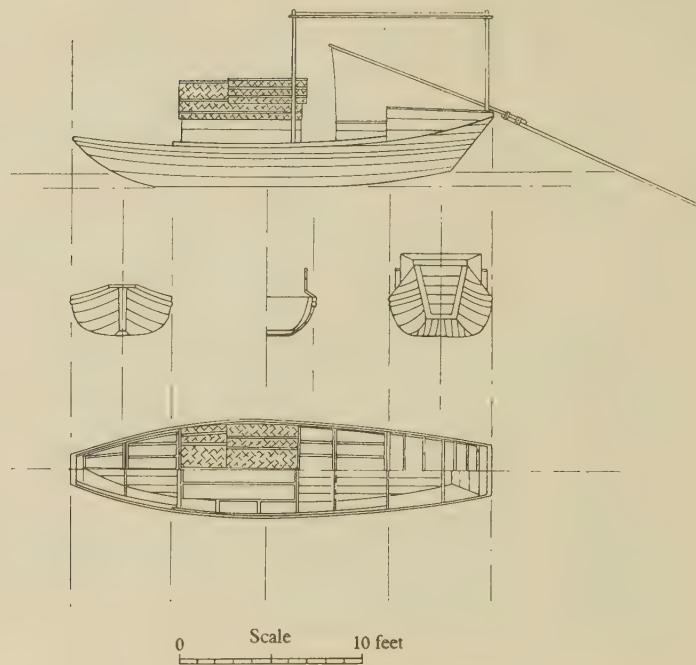


Fig. 7. The Slipper Boat.

#### (6) THE SNAKE BOAT OF THE CANTON DELTA

No description of the nautical life of Kwangtung would be complete without a passing reference to smuggling. To the native of Kwangtung, especially if he has a seafaring or fishing background, smuggling comes naturally. It has been handed down as a mode of life from father to son for countless generations. It is accomplished with a good deal of risk, which does not worry him very much, and it is a gamble, something which every Chinese loves.

Like everything else in China smuggling is a highly specialized profession, strictly controlled for the benefit of the majority—of the smugglers, of course. In Kwangtung smuggling is endemic and more especially so in the delta of the Canton River. Here there is hardly a bay or suitable landing place that has not been the scene of the activities of skilled, brave and adventurous law-breakers. This was chiefly due to the fact that the free ports of Hong Kong and Macao offered a fruitful field for illicit traffic in any article that happened to be on the very extensive list of commodities controlled by the Chinese Maritime Customs.

In the old days smuggling was carried out in slow-moving old-fashioned boats in deep water. These areas of the delta came to be so well patrolled by Chinese Customs vessels that the smugglers had to turn their talents to other means of achieving their aims.

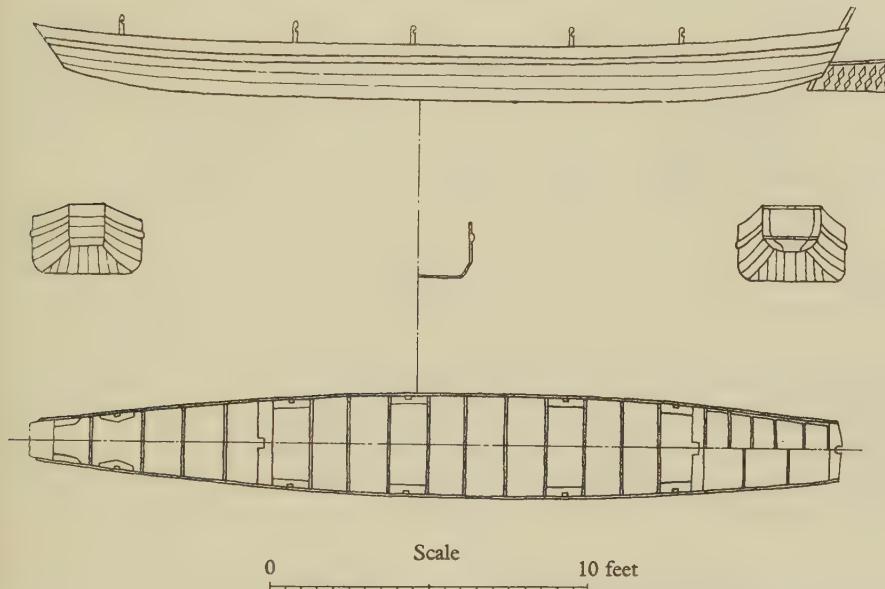


Fig. 8. The Snake Boat.

And so the Snake Boat (Fig. 8) came into being, so called because it was long, narrow and swift. It was designed to operate in very shoal water, at high speed, over mud flats and thus to be out of reach of the Customs patrol launches. In general it followed the lines of the Dragon Boat and varied in size from the small type measuring about 25 ft. with a crew of five to eight men to the large type up to 50 ft. requiring twenty-five or more men, using paddles. A mat sail, for use when the wind is aft, was set on a mast stepped amidships. A fenestrated rudder, typical of Kwangtung, is sometimes used, but the boats are more often steered by means of an oar over the stern.

Picking a moonless night, a strong wind and an ebbing tide, the Snake Boat fleets would assemble in Macao Harbour. At a given signal they would sweep through the Malachow Pass and over the shoal water mud flats for places to the west of the Canton Delta. Their object was to remain in very shallow water where the Customs launches could not reach them.

The usual cargoes for China consisted of sugar and kerosene, while opium, rice and piece goods were conveyed on the return journey.

The boats were always very carefully loaded, sugar in small sacks and in single tiers were stowed along the side of the Snake boat, so as to provide cover against rifle fire. Piece goods in oiled bags were stowed down the median line.

When attacked by Customs launches, the crew would jump overboard and return the fire from behind the shelter of the sugar sacks, pushing the boat forward if the water was shallow enough. The Customs captured or sank numbers of these boats, but on each venture of this sort a sufficient number would manage to get through to make it worth while.

The Snake boats of the Macao area passed into the limbo of forgotten things when the Customs eventually built craft able to operate in very shallow water. Their place, after the war, was taken by junks, adequately protected by armour plating and fitted with as many as six motor engines, the propeller shafts radiating in different directions! In place of the old-fashioned gingall, firing nails, they were armed with 'bazookas', depth charges and submachine guns, which at that time were very easy to obtain.

The Chinese Customs Revenue Steamers and Launches were operated by non-Chinese, usually British, officers with Chinese crews. The achievements of this unique Service constitute a thrilling story yet to be written.

It is a commonplace to say that the Junks and Sampans of China are doomed. Doomed they may be but they will die hard and slowly in Kwangtung, where what seems to be an endless variety of craft carries on business on the river roads of China.

## DEAL LUGGERS

By G. Appleton

**A** REVIEW of the shore craft of the Downs is simplified if it is limited to the last half of the nineteenth century. At its turn, the story ends while, if one goes back before about 1850, odd types<sup>1</sup> cross the trail and the evidence of old prints becomes confusing. By that time the overall conception of design had settled down to a state of uniformity which was closely adhered to by successive generations of builders, riggers and sailmakers, as evidence the fact that many of the boats on the beach in 1890 were known to be at least 40 years old at that time. It can fairly be said that the last half of the nineteenth century was the heyday of the big Deal boats and the boatmen.

Throughout this period the beach in front of the borough of Deal, the town of Walmer and the village of Kingsdown, was almost completely occupied by boats of several types and sizes. These were owned, singly or in twos or threes, by an individual boatman or company of boatmen. By ancient custom or prescriptive right each owner or group occupied and held undisputed possession of their own regular pitch.

Six special types of boat seem to have been evolved to cover every need and purpose. (*Note.* Notwithstanding a vivid picture in mind of the shape, rig and general appearance of all these boats, one has forgotten exact figures for overall length and displacement, at which it is only misleading to guess.)

*The Lugger.* Probably as large a craft as could possibly be beached; in size and appearance not unlike the large fishing boats to be seen on Hastings (old town) beach forty years ago. A decked-in peak or small forecastle contained bunks to enable a crew of six to cruise for a week or two in any weather. Otherwise the lugger was an open boat, with no half decking. There were thwarts, but only to brace the hull; when using the sweeps in a dead calm, men would stand, pushing the looms of the oars. Characteristics (applicable to all types of Deal boats) were a straight stem and a square stern, with a straight, ironshod keel and bilge keels to ensure fair weatherliness and protection. There was an eye in the fore and after end of the keel for attachment of the capstan cable. Counter lines were fine and clean and bow lines as fine as the rather broad beam permitted. The

<sup>1</sup> One remembers seeing an old whaleboat and 6-oar galley lying on the beach in 1887.

ratio of depth: beam: length was approximately: depth, top of keel to top of gunwale, one-fifth of length; beam, one-quarter length. When built, these big hulls would have been man-handled on rollers to the nearest point for launching and then towed to the point of delivery.

The rig of the luggers was what was known as 'foresail and mizzen' and comprised a jib, made fast to a traveller, hauled out on the bowsprit; a large balance lugsail, really the main sail, set on a mast stepped at the peak bulkhead, the tack of the sail made fast at the ring over the stem through which the bowsprit passed and the clew sheeted home well aft; also a smaller standing-lug mizzen on a mast stepped at the sternboard, the sheet passing through a block at the end of a spar projecting outboard from the stern. The balance lug needed skilful handling. The sail could never be allowed to 'come aback', especially when the boat had lost way, or it would capsize the boat. For this reason two sets of foresails were carried. When going about and the helmsman shouted 'lee-ho', the sail would be run down as the boat luffed, the traveller unhooked and hooked to the other sail which was quickly hoisted as the boat paid off.

The practice of using linseed oil and varnish as a preservative outside the planks, and painting the gunwales and sternboard black, gave the luggers (and other types with a few exceptions) a uniform appearance of light, golden brown hulls defined by a black streak of width proportionate to the size of boat. The boat's name in bold letters, over 'the name of owner'—'Deal', appeared in gold or yellow paint on the sternboard—and nowhere else. No registered letters or numbers were carried.

These notes concern only reminiscences of comparatively recent times. Doubtless large lugger-rigged boats were to be seen on the English, as they certainly were on the French, side of the Channel two hundred or more years ago. The question here is, just what caused this collection of big boats on the Downs seaboard originally. Probably succour to shipping in the vicinity of the Goodwin Sands, before Trinity House placed lightships there, contributed, also traffic with the Continent, lawful and otherwise. Luggers would have been the only means of life-saving before lifeboats were stationed at Deal, Walmer and Kingsdown; salvage was an important part of the work of the lugger; a heavy bow sheave could be rigged with which a lost anchor and chain could be recovered; luggers were large enough to carry a spare ship's anchor to a vessel in the Downs requiring one. In the 'eighties there was an anchor park at Sandown (local name for the north end of Deal). Prior to about 1890, when sail was disappearing, a prolonged blow from the west or south-west would cause vessels to collect at anchor in the Downs at the rate of something like a hundred a week. This provided much work for the luggers in carrying supplies to them. As

their work diminished they took to cruising down channel, hovelling. A Deal lugger was in the vicinity and rescued a few survivors from H.M.S. *Eurydice*, a training frigate, when she capsized in a squall within sight of Lucombe Chine, Isle of Wight, in 1878. The *Reform*, with an unusually large crew on board, struck the Deal Pier in a gale and was lost with all hands, who were buried in a common grave in Deal cemetery. The *Tiger* was decked, given a lute stern, painted black, ketch-rigged and used to ship sprats, which were canned in a small factory in north Deal and probably sold in London; though rumours were heard that they went to a French port to be labelled and sold as sardines. Other luggers were sold round the coast. Only the old *Renown* remained for a great many years as a museum piece on Walmer beach. Some names of luggers are given later.

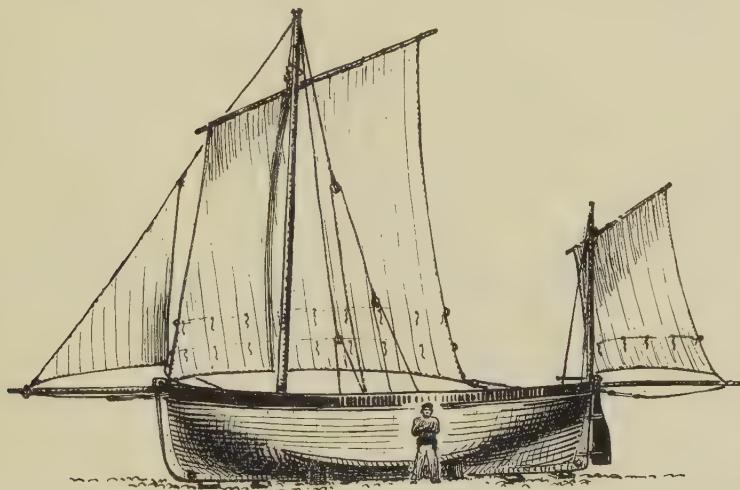


Fig. 1. Deal Lugger. (From a sketch by the author.)

Luggers were kept shored up bow seaward, with greased skids under their keels, on just sufficient incline to produce a slight gravity pull, checked by the capstan cable. The latter was attached to the keel with a trigger, closed with a serving of twine. At launching, greased skids were laid to the water's edge, chocks removed, leaving the trigger as the only control, then with the crew on board and jib and mizzen set, someone would cut the twine and release the trigger; the boat would glide forward then plunge down the steep of the beach with momentum to send her well out. In certain circumstances, e.g. low tide, on-shore wind, heavy breakers, recourse was had to twin haul-off warps as used by the lifeboat, anchored well beyond low-water mark. The ideal landing was made by coming in on a breaker, under

jib and mizzen and running up the beach as far as possible. A group was always standing by with capstan cable and skids, ready to attach the former as a wave receded. The boat was hauled clear of the water and turned on skids with the capstan cable transferred to the stern. Then, with capstan bars fully manned, the boat was slowly hauled over the steep rise of the beach, skids being plunged under the keel at every 2 or 3 feet, as the bow left them free to be dragged up. It was a thrilling sight when a lugger was beached in a gale, and a tricky job for the helmsman.

From the proceeds of voyages, one share was allotted to the boat and the balance divided among the owner, or owners and crew in agreed proportions.

*The Cat.* The cat was without doubt the answer to a need for a boat that cost less than a lugger to build and maintain, but could do most of the work of a lugger. There is evidence to support the belief that the small number of them only appeared after the last lugger had been built. They were built to exactly the same design and ratio of dimensions as the lugger and were only slightly smaller. In fact the two types were hardly distinguishable at any distance. The displacement of the cat was rather less and there was no decked-in peak as in the lugger. Instead, a movable sleeping caboose could be placed between two thwarts amidships for cruising. As should have been mentioned in connexion with the luggers, a 12-foot punt could be taken to sea for use as a dinghy, lashed upside down across the thwarts. The term 'cat' was merely a technical one; they were all commonly referred to as 'luggers'. One happens to remember seeing the *Success* sail to cruise down channel one calm morning about the years 1890-95. A few days later news came that she had met bad weather and been driven ashore at Dymchurch, where her bones remained for many years, half covered with sand. Some elderly members of the crew were drowned in trying to reach the shore. The *Early Morn* received a set of fore and aft sails inscribed with an advertisement for Beecham's Pills, and in this guise took passengers for two-hour trips in the Downs. Beach stones sewn up in canvas bags were used as ballast in all Deal boats.

*The Half Boat.* This is mentioned next because it was really a small member of the lugger family, being the same as regards ratio of dimensions and rig. It was actually a big, sea-worthy foresail and mizzen punt but much smaller than a cat. It was used almost exclusively for net fishing in the mackerel, herring and sprat seasons and for this reason carried an iron lamp bracket forward. Boatmen who confined their activities to hovelling would be unlikely to own one of these.

*The Punts.* These were also built on lugger lines and varied in length between 12 and 16 feet. The larger punts were used for line fishing and

were foresail and mizzen rigged, sometimes with, sometimes without, bowsprit and jib.

(Not included among types of Deal boats noticed here was a Thames design which the Deal builders, probably about the later 'eighties, began producing in increasing numbers and in form suitable for the open sea, namely, the single sculling skiff with canvas covered bow, later replaced by a sturdier double sculling design. These and the 12-foot punts the boatmen hired out by the hour to the ever-increasing number of summer visitors.)

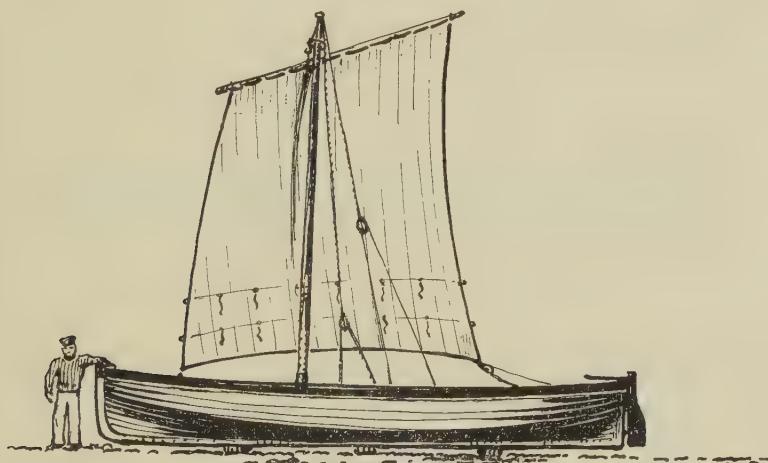


Fig. 2. Deal galley punt. (From a sketch by the author.)

*The Galley punt.* Though this and the galley have come at the end of the list, they should be regarded as ranking with the luggers in usefulness and prestige. Both were utterly different to the luggers in appearance. The galley punt was a noble boat and probably the boatmen's favourite. The name suggests that it was a development of the galley, aimed at producing a more seaworthy craft having greater range of operation, a craft that could do more than carry messages, light loads or one or two passengers in fair weather. However, in the light of the speed sacrificed to obtain these advantages, the galley could not be dispensed with entirely.

The overall length of the straight stemmed and sterned galley punt was approximately six times the beam (as compared with the luggers' four). This greatly increased proportion of length to beam, together with the use of a single large balance lugsail on a mast stepped slightly forward of amidships, produced the contrast in appearance mentioned above. The mast could be quickly unstepped for convenience when rowing, by opening

a movable clamp holding it to a thwart. Though rather heavy, a galley punt could be rowed, the men usually standing and pushing the looms of the oars. But the crew nearly always depended on sail, the alternative port and starboard big lugsails and a mast being the normal equipment carried. In anticipation of a long journey on a fair and light wind, with no tacking, a second mast might be put in the boat. In the annual regatta, weather permitting, two masts were used, each with a big balance lugsail, in the manner of a naval cutter of the period.

The galley punt was the most useful all-round type and, by proving more adaptable to changing conditions as sailing vessels began to disappear, outlived the lugger, some even surviving to be fitted with auxiliary power in their old age. 'Hovelling' was their principal occupation—and hovelling meant anything from ranging the Downs and Goodwin Sands, on the look-out for flotsam and jetsam of some value, to waiting on the track of passing ships on the chance of being hailed to do some errand. It was a fairly common sight to see a galley punt towing astern of an ocean-going vessel, possibly to land a last-minute message at Dover for the owners, or homeward bound, perhaps an urgent report or request, at Margate, before the days of radio. They sometimes followed the lifeboat out to a wreck, to lend assistance. In foggy weather, if the Gull, the North Sands Head, the East Goodwin or the South Sands Head lightship fired a gun, to warn a ship heading for danger in their section of the sands, two or three gallypunts would immediately be launched and make their way in the direction whence the sound came. They would hail the lightship to discover the cause of the alarm, then make for the ship and, as likely as not, after a little bargaining the Deal men, with their intimate knowledge of the Goodwins, would go on board and help navigate the vessel clear. It was the gallypunts which made a great haul for the boatmen when the full-rigged ship *Hazelbank*, homeward bound on her maiden voyage, went ashore on the Goodwin Sands under full sail, one fine summer afternoon in 1890. For weeks they were busy salvaging cargo and removing sails, rigging and fittings.

*The Galley.* These were fewer in number than the gallypunts. Comparison with the galley punt hardly assists description; the galley was primarily designed for speed, in fair weather, to be pulled (not pushed) by four rowers and steered by a coxswain, with yoke lines. (Note. Luggers and gallypunts used tillers which, in the luggers, were of iron, indented with a half circle to clear the mizzenmast.) The bow and counter lines of the galley were very fine; the beam was only about one-eighth of the length, with the depth in proportion. A galley would be used to carry messages, light loads or one or two passengers between ships and shore in fair

weather. It was especially suitable in such emergencies as were from time to time bound to occur, e.g. when a ship entered the Downs flying a signal for a doctor.

With the wind fair a galley might hoist a small balance lugsail on a short mast, stepped a little forward of amidships as in a galley punt. Galley races in the annual boatmen's regatta were rowed, with crews of the younger men, and the boats well polished below the waterline with blacklead.

A 6-oar galley preceded the 4-oar type. The former disappeared over 100 years ago, but both were undoubtedly in use concurrently for a time. Stories were told of stealthy dashes across the Channel, made by the 6-oar galleys. One recalls having seen one of them on the beach, sawn in halves, and remembers being told that this was one of the penalties imposed when a boat was caught smuggling.



Fig. 3. Deal galley. c. 1892. (From photograph 4611).

It has been mentioned that boat owners held undisputed possession of the portion of the seashore on which they kept their boats. The Deal sea front, from the Timeball Tower northward to the new Coastguard Station, contained stretches at either end, with shorter gaps between, where no building had ever taken place between Beach Street and the sea. All these open spaces immediately over the sea were quite filled with serried lines of the types of boats just described. As an example, in one gap might be found a lugger, two gallypunts, a galley and perhaps a small punt, all under the same ownership. Behind the lugger there would be a heavy capstan with vertical cable drum, to the top of which a flat steel cylinder, pierced with holes for the capstan bars, was fixed. The cable, normally attached to the stern of the lugger, could easily be transferred to the lighter boats, at a slight angle, by means of a pulley. All but the punt would be shored up on an even keel ready for launching. There would be a tarred hut near the capstan where stores, spare rope, paint and varnish, oilskins and a long telescope would be kept. Some of the boatmen, when not at sea, would always be found here, in the hut or lounging on the capstan, but always with one eye out to sea. This arrangement continued all along the beach. Some might not own a lugger, perhaps only a single gallypunt, others, interested in fishing, would have one of the 'half boats' beside their gallypunt and other boats.

*The Builders.* The Deal boat builders evolved and handed down from father to son a completely suitable method of construction to withstand the stress of launching and hauling up on an exposed shingle beach in all weathers.

The 'clinker' method of over-lapping the planks was used exclusively. Well-seasoned elm and ash were shaped into the thinnest planks and the lightest ribs permissible for the size of boat and these were skilfully united to produce a stiff but light hull.

Within each type, dimensions varied hardly at all and it is probable that each builder would have laid the keels to permanent marks in his shed for luggers, galley-punts, etc., and would have kept standard cross-section templates in his loft.

The light ash ribs were closely spaced and the planks so bonded that no caulking seemed necessary. The sides of undecked boats needed extra bracing and this was supplied by stout thwarts firmly fixed with oak or ash knees, cut from a right-angular grained piece of timber.

A builder, Nicholas by name, who in 1890 must have been over 80 years old, worked with his sons in a shed at the extreme north end of Beach Street. He built the last boat approaching a lugger in size, to an order from Australia, sometime during the 'nineties. His sons were said to have moved to Chatham or Sheerness to build boats for the Royal Navy during the First World War. If any of them are still living, and could be located, they should be able to disclose the exact dimensions of the several types of Deal boats.

Hayward's shed was at the south end of the town and there was another between, whose shed was on Middle Street, one block from the sea; rather a long haul for the new boats.

*The Boatmen.* A tall, aged boatman, born before the battle of Trafalgar, used to be seen sitting outside the Almshouses, wearing a beaver top hat. Many of the active boatmen were old men. At this period some of the young men were still taking to the life, though in their later days, they would be depending on pleasure craft for their living.

There was something about the boatmen that made them seem different to other men to an extent not altogether accounted for by occupation. They were said to retain some strain derived from the Jutes who settled in East Kent after their fifth-century invasion. They sometimes transposed the pronunciation of their 'v' and 'w'. It caused no surprise when one of them spoke of 'wery dirty veather'. There was no evidence of any eagerness among them to leave the sea for other occupations. They were of course hardy, courageous and kindly men.

Their usual dress was heavy dark trousers, well-greased leather welling-

tons, brown or dark blue woollen turtle-necked sweaters or cardigans, sealskin caps of various shapes, sometimes an old pilot cloth reefer jacket and, at sea, oilskins and sou'westers.

There was little prospect of the reward of wealth for them, though some achieved more affluence than others. One lugger owner was the licensee of a public house opposite his beach pitch. Some boatmen owned bathing 'machines' which were parked away through the winter and brought down to the beach in summer. These were on four large wheels and were lowered into about 3 feet of water by means of the two-handled winch used for the lighter boats. Down steps between two projecting wings, the heavily clad ladies descended and became submerged before coming into view of the public on the beach. Selling fish round the streets in the autumn was another side line to which the boatmen were quite willing to apply themselves.

When the lifeboat house bell was rung in response to a gun, rocket or flare at sea there was a scramble for the doors, in which the north Deal men had an advantage. The first to get belts were usually chosen as crew; lifeboat service was eagerly sought, and not solely for the fixed sum paid to each of the crew.

Some names of boatmen: Riley, Roberts, Redsull, Jarman, Finnis, Goymer, Budd, Adams, Hanger, Norris, Marsh and Grigg. Two of these stand out in one's memory as splendid characters and delightful men, namely, Dick Riley and Richard Roberts. Some lugger names, more or less in order of their stations along the beach from north to south: *Tiger*, *North Star*, *Early Morn*, *Albion*, *Success*, *Lord Paget*, *Cosmopolite*, *Friend of All Nations*, *Galatea*, *Reform*, *Renown* and *Amazon*. And of galley-punts: *Wanderer*, *Endeavour*, *Gipsy*, *Albion*, *Belle*, *Our Boys* and *Hope*. A galley was named *Faith*.

## NOTES

## ENGLISH AND SPANISH TONNAGE IN 1588

The Spanish method of calculating tonnage measurement gave a result greater than the English by a considerable amount. In the first place, the Spanish *tonelada* was smaller than the ton English by about one-tenth; while the measure employed by the ship builders of Biscay was a sixth smaller still than the *tonelada*.

The Spanish formula was

$$\frac{(d \times \frac{1}{2}b \times L) - \frac{1}{2}0}{8} = \text{net tonnage},$$

where  $d$  = depth of hold,  $b$  = beam,  $L$  = length over all (which was nearly twice the keel length). To obtain the gross tonnage add one-fifth.

The English formula in use under Elizabeth I, gave a tonnage nearly one-sixth smaller for the same vessel:

$$\frac{k \times b \times d}{8} = \text{net tonnage},$$

$k$  being the length of the keel. The gross tonnage was obtained by adding one-third.

EDGAR K. THOMPSON

## SHIPS' NAMES

An article by the Naval Correspondent that appeared in the London *Times* on 10 November 1958 on choosing names for warships states that one of the considerations that is taken into account is 'the use that may be made by the lower deck wit of the title chosen for the ship in which he is serving'. Several instances come to mind, for example: *Nelson* and *Rodney* to Nelsol and Rodnol because, like the R.F.A. oilers whose names ended in . . . ol, their single funnels were aft. *Resource* the repair ship to Remorse the despair ship. *Cyclops* to Cyclebox. *Antelope* to Antellypee. *Penelope* to Pennyloap and after being sprayed with bomb splinters to Pepperpot. *Weston-super-Mare* to Aggie on horseback, a reference to Miss Agnes Weston's Sailors' Homes.

There must be many others?

BRIDPORT

THE FIRING OF THE *ANDREW*

Admiral says of the reported firing of the *Andrew* in the last battle of 1653 that 'the story seems to be a later invention' (*M.M.* 1958, p. 285). It was evidently very much exaggerated, but not so very much later than the date of the battle. Elias quotes it from *Hollandsche Mercurius* of some date in 1653, and it was mentioned in a Dutch report from the English side of the North Sea on 29 August of that year (*First Dutch War*, Vol. v, p. 409). Montanus includes it in his account of the war printed in 1655 and we now know that Van de Velde testified in 1656 that he had actually seen the incident (*Van de Velde Catalogue*, p. 5).

R. C. ANDERSON

## STORM AT SAMOA

(See *M.M.*, Vol. 44, p. 286)

May I add a few personal details about Admiral Sir H. C. Kane of H.M.S. *Calliope*. He was a member of a most distinguished Irish family, of Killiney, Co. Dublin. His father was Sir Robert Kane, President of Queen's College, Cork, and two of his cousins were well-known members of

the Jesuit Order in Ireland. He entered the Navy in 1858 and served in the *Northumberland* before going to the *Calliope*. My interest in his career dates from the time that I sat, literally, at his feet in Castleknock College, Co. Dublin, where a full-length portrait in oils hangs in the College refectory. Mr Oliver Warner may be interested to know that a fine print of the *Calliope* also hangs in the College. Kane died in London in the year 1917, aged 73 years. J. S. CONAN

### THE TRESCO VALHALLA

(See *M.M.*, Vol. 44, p. 333)

I refer to the note on the Tresco Valhalla in the latest number of the *Mariner's Mirror*. I can supply some information about the wreck of the *Colossus* in 1798.

A letter from Lord Spencer to Lord Bridport, dated 27 December, which I have seen at Althorp, reveals that she broke her cable, and was at the time short of anchors. The incident is chiefly interesting because it was used as ammunition in an argument as to whether St Mary's was suitable for a fleet base.

Sir Edward Pellew, who had been stationed there with a frigate squadron, strongly pressed its claims. Bridport, C-in-C. of the Channel Fleet, said it was unsafe, and said the loss of the *Colossus* proved this. Spencer argued that, in the circumstances, her wreck proved nothing.

St Mary's was, however, not used by the main fleet, probably because of difficulties of supply.

R. C. SAXBY

### THE SOLITARY GRAVE OF DIEGO RAMIREZ ISLANDS

(See *M.M.*, Vol. 44, p. 145)

In the May 1958 issue of the *Mariner's Mirror* there was a note regarding the marble headstone found at a grave on lonely Gonzelo Island, one of the Diego Ramirez Group off Cape Horn. Although the name of the man buried and the date is legible on the stone, you asked for information as to the possible identity of the name of the vessel, as only a portion of that name was legible, that being 'Schr.----onzo'.

I believe this vessel was the sealing schooner, *Alonzo*, which sailed out of Stonington, Connecticut, in 1832, on a sealing voyage to the Falklands and the islands around Cape Horn. The *Alonzo* had made a previous voyage to this same area.

EDOUARD A. STACKPOLE

### CABOT'S SHIP *MATHEW*

For many years there have been models and reconstructions of the *Santa Maria*, *Golden Hind* and others, but until comparatively recent times I know of none purporting to be of John Cabot's ship the *Mathew* of 1497.

This is understandable as there is even less to go upon than with the aforementioned ships. The Bristol riots and fire destroyed many early records and quite probably the logs and other records of these early voyages were destroyed at this time. Data may, of course, still exist; there is a story that a foreign ambassador stole the logs and took them out of the country.

The Bristol Custom house records do not cover the period of the voyages, and the only mention of the *Mathew* is later in 1503 when five entries are found for Ireland and the Continent. She was listed as a *navicula*, which was a bark fully rigged and decked for ocean voyaging, was of 100 tons and carried eighteen men in the 1497 voyage.

It may be thought that under these conditions it would be rather pointless to attempt a design, however the local interest, and the lack of positive information seemed to me an added incentive to design a probable or at least possible vessel using the name to pin-point the period, type and size.

My own interest in the *Mathew* was aroused well before the Second World War and has led to the accumulation of many sketches, cuttings and notes. Several years ago I received a letter

from Canada asking for any information I might have concerning the ship. This request coincided with the publication in the *Mariner's Mirror* of Mr Morton Nance's splendid articles on the 'Ships of the Renaissance' and encouraged me to produce plans and a model of a late fifteenth-century ship which could have been the *Mathew*.

The drawings on the Warwick Manuscript have always impressed me as having been executed by someone with a first-hand knowledge of those ships, and there are a number to choose from, essentially similar and simple in hull shape, so my original conception started from there. The *Mathew* would probably follow the old, 'one, two, three rule', twice the depth for the beam, and three times that for the length. She would be very round fore and aft, with considerable tumble home and a strong probability that clench planking would be used. The question of whether she had vertical cleats or not, how many, and where placed, has been temporarily settled by having none. There seems little rhyme or reason for the placing of these on many contemporary illustrations.

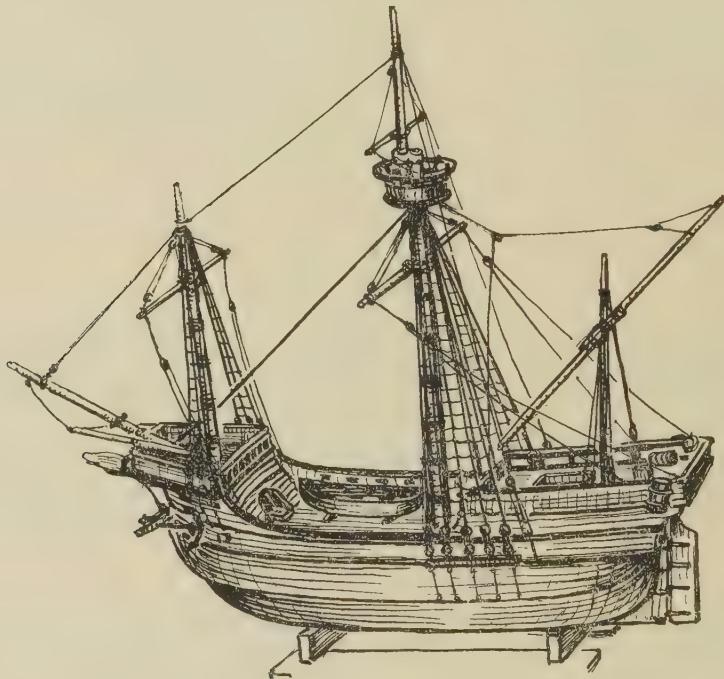


Fig 1. Poole: Cabot's ship *Mathew*.

I have been unable to find support for the impression that the *Mathew* had no forecastle, and think it much more likely that she had one; for one thing, it would give considerable protection when plunging westward through the North Atlantic seas. The reverse clench planking of the cubbridge head gives foothold and access to the forecastle, below which would be the manger, the foremast with bowsprit housing to starboard, the forward ramshead, the strongback and the cable hatch. In the stern the tiller just clears the mizzen mast, the helmsman being able to watch the sails through the hatch forward of that mast and his wake through the tiller opening. There is a companion ladder in the hatch opening giving access to the quarter deck and forward of that a capstan. The break in the quarter deck has a central doorway abaft the mainmast and main ramshead and two square window openings in the overlapping planking, and above, as with the forecastle break, there is a stout wooden rail.

The rigging follows contemporary practice to the best of my knowledge, and the proportions are an estimate. Cabot knew the conditions to be faced, as there had been regular voyages from Bristol to Iceland, therefore he would retain a compact sail plan. The stowage of the spritsail yard is practical, and in fact was used in the model after rigging outboard, by slackening off the parrel and the port lift. Many details are rather guessed at on the model, where some solution had to be arrived at, particularly the position of, and method of belaying, the running rigging. It is hoped eventually to fit sails when more is known of these questionable details.

The colouring is brownish grey below black wales and warmer above. The castles and top have green panels and brick red surrounds. The bulwark timbers, scuppers, hatches and rails are also red, and the figurehead, less clumsy than it appears in the photograph, is yellow ochre.

I submit this note, hoping that more information and some constructive criticism will be forthcoming. One modification has been made—the topmast is now lashed to the main.

NORMAN H. POOLE

### MANNING THE ROYAL NAVY

(*M.M.*, Vol. 44, no. 4, p. 304 f.)

Very interesting confirmation of Mr Taylor's remarks about the superior efficiency of the French navy in the middle part of the last century is to be found in chapter xxix, 'Reminiscences of the Mediterranean Crisis of 1859-61', by Rear-Admiral Sir Rodney Mundy, K.C.B., published as *H.M.S. 'Hannibal' at Palermo and Naples during the Italian Revolution of 1859-61*. Mundy wrote: 'From the general acquirements of the officers, the uniformity of the system of discipline, and the perfection of detail in every branch of organization, it may be broadly admitted that the French navy ranks in efficiency amongst the first of the maritime powers of the world.'

Further, he writes in detail and with interest about the method of construction of the French, and other, warships of the time encountered by him during his Mediterranean campaign. The French ships of the line had, he considers, 'advantages over those of other nations in the grand essential of security to the rudder'. During westerly gales in the open roadstead off Beyrout, 'the ships of the French fleet were comparatively steady, rolling four or five degrees each way, whilst many of the English vessels rolled from sixteen to twenty degrees'. But he makes an exception of the *Renown*.

The famous Admiral Paris visited *H.M.S. Hannibal* and 'astonished the chief engineers by his knowledge of every branch of their profession, both theoretical and practical'. French engine-rooms were, however, not equal to those in the British ships. Mundy found French warships' boats infinitely superior to British: 'I have seen them beat off to their ships, both at Naples and Beyrout, in weather which our pinnaces and barges could not possibly face.'

French petty officers Mundy found to be 'decidedly superior to our petty officers, so far as self-respect and discipline are concerned'. As for French gunnery, he notes: 'The system of trained gunners is carried to the highest point in the French navy.'

In spite of all this, Mundy was optimistic, and believed that his own service was on balance better than that of France. The whole of the last chapter of his most interesting book does, however, provide a great deal of evidence in support of Mr Taylor's exposition of the crisis in which the British Navy found itself almost throughout the first half of Queen Victoria's reign.

J. E. DE COURCY IRELAND

### THE YACHT FUBBS

Commander May's contribution, 'The Honeymoon Voyage', in the May 1958 issue of the *Mariner's Mirror*, prompts me to submit a brief résumé of the origin of the name *Fubbs*, yacht, in which the recent bride was embarked.

'Fubbs' was the nickname bestowed by Charles II upon Louise de Kéroualle, Duchess of Portsmouth and Aubigny; and the King gave this name to the *Fubbs*, yacht, in her honour. The N.E.D.,

where the earliest record is 1614, states: 'Fubbs is a half-contemptuous name for a chubby child or person.' We may therefore suppose that the Duchess was both plump and broad of beam.

The General Lists of the Navy, 10 December 1688, amongst the Domestic State Papers of the reign of James II, state the *Fubbs* was built in 1683 and was a vessel of 148 tons. On a peace footing the ship carried 30 men and 10 guns both at home and abroad.

The *Fubbs* was designed by Charles II. This is gathered from an extract from a newsletter of Henry Muddiman dated Tuesday, 11 September 1683:

'On the 7th, he (the King), set sail about eight, and arrived at Southampton before one, the *Fubbs*, a yacht built by a draught drawn by his Majesty's own hand outsayling all the rest.'

EDGAR K. THOMPSON

### ROMAN SHIPS WITH CLIPPER BOWS

In a review of Foucher's *Navires et braques... à Sousse* (M.M., 1958, p. 341), Dr R. C. Anderson questions the fidelity of the Roman ships shown in the Susa mosaics because they '...all show ram bows only suitable for galleys...' which '...certainly conflicts with the idea of Roman ships gained from the sculptures'. Dr Anderson apparently believes that all Roman ships (as differentiated from galleys) should have a stem which curves up as a continuation of the keel. Such a structure was indeed common on many Roman 'round-ships', but certainly other Roman ships which are obviously not galleys have 'ram bows', or more properly 'clipper bows', since the ships are not galleys.

There were obviously two types of Roman round-ships, one with a stem which curved up from the keel and the other with a clipper bow. Roman sculptors and mosaic makers actually showed both types in the same work, apparently to emphasize that there were two kinds of merchant vessels. I have recently published such an example of a mosaic from Ostia, ancient port of Rome, showing both types (M.M., 1955, p. 250). It is difficult to see how there can be any question about the fidelity of these Ostia mosaics. Both types of ships are also shown on the Ny Carlsberg Glyptothek sarcophagus relief so well published by Lionel Casson.<sup>1</sup> The ship at the right of this relief has a clipper bow. It is obviously not a galley. I have suggested that this relief may perhaps be one of the most realistic pieces of sculpture in the whole history of marine art (M.M., 1957, pp. 160-4). Certainly the fidelity of this relief is beyond question.

There are dozens of examples of the clipper-bowed Roman merchant ships found singly in all forms of Roman art. They are not restricted to the mosaics. One good example is found on a coin of the emperor Commodus.<sup>2</sup> However, all of these representations could be dismissed by one not wanting to accept them as the work of naïve artists who knew nothing about marine affairs. But we have the two Nemi ships preserved from Roman times. One of these has a graceful clipper bow.<sup>3</sup> It is obviously not a galley, but rather a broad-beamed flat-bottomed barge. Therefore, we must admit that a 'ram bow' or a clipper bow was as common on Roman ships as an upwardly curving stem. The clipper shape of these bows obviously preserves a type of boat of which we may suppose the galley with a ram represents a very specialized form.

RICHARD LEBARON BOWEN, JR.

### ANOTHER FIVE CHANGES OF NATIONALITY

Volume 43, No. 3, of *The Mariner's Mirror* for August 1957, mentions an instance of a ship having five changes of nationality. From this side of the Atlantic, an identical situation was experienced by a ship of the U.S. Navy.

<sup>1</sup> L. Casson, 'A Sea Drama in Stone', *American Neptune*, Vol. xv (1955), pp. 217-19; L. Casson, 'Fore-and-Aft Sails in the Ancient World', M.M. (1956), pp. 3-5.

<sup>2</sup> C. Torr, *Ancient Ships* (Cambridge, 1895), pl. VI, 28.

<sup>3</sup> G. Ucelli, *Le Navi di Nemi* (Rome, 1950), pl. V.

No warship listed in the Navy Register of the United States ever had a more curious history than the ironclad *Stonewall*. During her career, she sailed under the flag of five different nations, was known by six separate and distinct names and took part in two bloody civil wars.

This ship was constructed at Bordeaux, France, on orders of the Confederate Government. She was equipped with a powerful ram to pierce the sides of Union antagonists and her hull was protected by armour to the thickness of 4½ inches. This ship was originally christened *Sphinx*. In the spring of 1864, the builder received orders from the French Government not to sell or deliver this vessel to the Confederacy, so he sold her to Denmark which was at that time at war with Prussia. In October 1864, the *Sphinx*, re-christened the *Stoerkodder*, sailed for Copenhagen. Before her arrival, the war was terminated and the Danes rejected the ship as being not to their liking. Prior to her departure on the return voyage to France, her name was changed to *Olinde* and a Confederate naval officer, Captain Thomas J. Page, came aboard as Mr Brown, a passenger. In the Bay of Biscay, the Danish crew left the ship in small boats and Mr Brown was alone in this warship, but not for long. A British steamer came alongside with a new crew and fresh provisions. The Stars and Bars of the Confederacy was hoisted, and the *Olinde*, alias the *Stoerkodder*, alias the *Sphinx*, was re-christened *Stonewall* in honour of the fallen Confederate General 'Stonewall' Jackson.

After refuelling at several places *en route*, the *Stonewall* finally reached Havana where Captain Page learned of the defeat of the Confederacy. Not wishing his ship to fall into Union hands, Page sold her to the Spanish Government. In this manner the *Stonewall* came under Spanish control but, in July 1865, she was in turn sold to the United States for \$16,000. For over two years she was in the Navy Register as *U.S.S. Stonewall*, but was later sold to the Japanese Government and re-named *Kotetsu*, the first armoured ship of the Japanese Navy. At a later date her name was changed to *Adsuma*, her sixth and last name for in 1891 she was sold to a Japanese fishing company.

EDGAR K. THOMPSON

### THE CAPTURE OF THE *STANHOPE*

A Spanish print of this action was mentioned in the *M.M.* in 1942 (pp. 166, 252). It was then suggested that the *Stanhope* must have been a privateer. Certainly there was no 'ship-of-the-line' or ship of any other class bearing that name in the Royal Navy at the time.

It would be interesting to know more of the action between the *Catalan* and the *Mary* in 1730. The two countries concerned were actually allies in theory in that year, though there seems to have been a certain amount of unofficial fighting in the West Indies.

R. C. ANDERSON

### ADVERTISEMENTS OF SPEED

Although the notes on the subject of Speed under Sail have now been closed, both the original article by the late Captain Learmont (*M.M.*, Vol. 43, p. 226), and the first note arising out of it by Mr Alan Villiers, emphasized the publicity value of the claims made for great speeds by the emigrant ships of the 'fifties. Looking through the files of *Trewman's Exeter Flying Post* for something else, I found this advertisement in the issue of 30 September 1858. It is extremely cleverly worded, with its double suggestion of speed and comfort, and it is adorned with a cut of a small paddle steamer, no doubt to give the more rustic readers of the *Flying Post* the impression that the *Shalimar* was some kind of a steamer! I should imagine that there must be many similar advertisements in the provincial press of the period, which would provide further evidence of the use for advertising purposes of such claims of speed under sail.

### 'Australia "White Star" Clippers'

The celebrated Ex-Royal Mail clipper-ship *Shalimar*, CAPTAIN BROWN, 1456 tons register, 4750 tons burthen, will be despatched from Liverpool to Melbourne as the packet of the 20th October, sailing punctually at Noon of that day. This noble vessel carried her Majesty's Royal

Mails, under contract, three successive voyages, during which she performed some of the most marvellous sailing feats on record; her first voyage was made from Liverpool to Australia (cape Northumberland) in sixty-seven days, from Melbourne to Liverpool in seventy-five days, and from Liverpool to Melbourne in seventy-five days. She has made four voyages round the world in two years and eight months and has sailed the extraordinary distance of 420 miles in one day, a feat never equalled by the fastest steamers afloat. Her saloons like those of the *Red Jacket*, *White Star* and other clippers of this line are handsomely furnished, and supplied with a Piano. Library, Bedding, Linen and all necessaries; a Cow for Saloon passengers. The second Cabin in the Poop is an elegant and airy apartment; and the Between-Decks are lofty and thoroughly ventilated. Passengers must embark on the 19th without fail. For freight or passage apply to the owners, H. T. WILSON and CHAMBERS, 21 Water-Street, Liverpool; to J. B. WILCOCKS, Agent, Plymouth; or to Mr W. NORRIS, Auctioneer, South Street, Exeter.'

MICHAEL R. BOUQUE

### RUSSIAN FLEETS IN THE CRIMEAN WAR

It was only quite recently that I had the opportunity to get into my possession a nearly complete file of *The Mariner's Mirror*, and thus it comes that I have only now sent my note on Dr R. C. Anderson's note 'Russian Fleets in the Crimean War', *M.M.*, Vol. 32, p. 183. I am most probably carrying owls to Athens but perhaps it is of interest.

I took my information from the *Marine Rundschau*, Vol. 14, 1903, pp. 1 et seq. It is an article called, 'Die Tätigkeit der russischen Flotte während der Jahre 1853 und 1854', by D. Lichatschew, translated by Major-general, Ret. C. v. Zepelin, and appeared originally in the *Wajennijski Sbornik*, Vol. 2, p. 3 (1902). Now this sounds like: 'I have heard from the friend of the sister of my brother-in-law's history teacher', but I am just quoting ship lists which themselves are taken from apparently quite original sources.

These lists give a few differences from Mr R. C. Anderson's lists, and maybe they serve an enlightening purpose. I left the ship names in the German version of the Russian spelling, feeling safer when not transforming them into the English variation, and thus running the risk of heaping shame on my head.

Ref. Query 2 (1955): German Navy mutinies in Kiel 1918. I have searched the bibliographies for German publications and found 2 books on this subject in German. May be some articles in a periodical, but the bibliographies for such are too voluminous to look through, if Mr de Courcy Ireland is highly interested he will surely find a bibliography in Ireland too. There are complaining remarks about the wicked socialists in Admiral Scheer's 'The German High Sea Fleet'.

W. MOLCH

### SPAIN'S PROUD NAVAL TRADITIONS

(*M.M.*, Vol. 44, no. 4, p. 326)

The steam frigate damaged off Callao in May 1866 was the *Numancia*, not as spelt by Mr Wettern. This vessel was built at Toulon in 1864, and was Spain's first armoured ship. In Spanish naval literature she is usually referred to as a 'Fragata blindada'—armoured frigate. The Jubilee edition of Jane's *Fighting Ships* classifies her as a 'broadside ship', and shows silhouettes of her as new, and after refit in 1900. One of the most gripping of the series *Episodios Nacionales* by Pérez Galdós, the great Spanish nineteenth-century novelist, is his 'Vuelta al Mundo de la *Numancia*', a magnificent account of Mendez Nuñez's tragic campaign. Chapter VIII contains a detailed account of the ship and of her trial run from Cartagena to Cádiz in January 1865. The chief character's first impressions of the new type of ship represented by the *Numancia* are well described in the previous chapter.

An earlier volume of the 'Episodios Nacionales' is 'Trafalgar', where Gravina, also mentioned by Mr Wettern, is well depicted, and many details are given of the great *Santísima Trinidad* and of her fate on 21 October 1805. These two books are worthy contributions from Spain to the literature of the sea.

J. E. DE COURCY IRELAND

## BRUGEL v. LOPES

In *M.M.*, August 1957, pp. 185–8, I expressed the opinion that Brugel made use of the works of previous artists, chiefly (directly or indirectly) of the Portuguese school of Gregorio Lopes. This is questioned by Mr O. Buysseens (*M.M.*, May 1958, pp. 147–8). It is a matter for everyone to form one's opinion after looking at the pictures. In case the ones I mentioned are not found convincing enough, here are two more (summary tracings of photographs). The case is typical of the Bruegel fashion, the hull being duly brought up to date and the arrangement of the sails left practically as it was in the older picture.

G. LA ROËRIE



A. F. and N. Castello: The Azores Exhibition,  
painting at the Escorial Palace.



B. Brugel: Suite de Vaisseaux de Mer.

## SOME GREAT GENTLEMEN

In the Royal Navy there has always been a number of senior officers, admirals and captains who stood out conspicuously by their elegant bearing and courtly and distinguished manners. It has been my privilege to have known some of them.

First and foremost I would place the late Sir Edward Seymour. Tall and elegant of figure, though not handsome; when and wherever his name was mentioned someone was sure to say 'Ah. Yes. A great gentleman', and he could even *look it* on horse-back, in full dress, at a state funeral or coronation review. Sir Edward lived to fly his flag afloat as an Admiral of the Fleet, a very rare distinction.

Prince Louis of Battenberg (afterwards Marquess of Milford Haven) was First Sea Lord at the outbreak of World War I. He was generally regarded as the most distinguished and scholarly naval officer of his time, and should certainly be included among the Great Gentlemen of the Service. His handsome and distinguished appearance, and his close relationship with the Royal Family may have had something to do with it: but his elegant manners and unfailing courtesy towards everybody would indubitably have stamped him as a Great Gentleman anywhere.

When he was forced to resign his office owing to an ignoble campaign conducted against him on the grounds of his German birth, he had the sympathy of almost every officer and man in the Navy.

John de Rabeck was a lieutenant in the *Britannia* in my time. I suppose he was best known as Commander-in-Chief in the Mediterranean during World War I, and the whole wretched business of the Gallipoli campaign; for whose failure he was in no way responsible. Later he was appointed as the allied High Commissioner at Constantinople where his charm and diplomatic skill in a very difficult position served us well. He too, was a Great Irish Gentleman.

Admiral Curzon-Howe was another who was famous for his splendid and elegant manners, and indeed for his courtesy and kindness too. I was once serving in a temporary capacity a navigator of his flagship the *Caesar*, we were lying in Plymouth Sound and due to sail at 7.0 a.m. At 6.30 I was astonished to see the barge of Sir Lewis Beaumont the Commander-in-Chief a Devonport approaching with his flag flying, and soon the C.-in-C. himself came over the side, being received at the gangway by Curzon-Howe with all formality. As soon as the two great men had gone below, I said to Chilton, Beaumont's Flag Lieutenant: 'Your old man must be mighty fond of early rising to pay official visits at this hour of the morning.' 'My dear fellow', said Chilton, 'Curzon-Howe has the name of being the politest man in the Navy. He called on our C.-in-C. yesterday, "pour prendre Congé", and of course Sir Lewis would never *never* allow himself to be outdone in politeness by anyone, so here we are.'

These Admirals were both Great Gentlemen.

Many people would place Lord Charles Beresford high on the list of Great Gentlemen of the Navy, and if I have not done so, it is (1) because I never knew him personally; and (2) that he was a rather too controversial figure. During his long period of Service, both in the Navy and in Parliament, he was certainly very popular throughout the country; but he was inclined to be somewhat of a popularity Jack, and indeed something of a mountebank. Moreover, his rowing with Jackie Fisher added nothing to his dignity.

Still, to many, he was a Great Gentleman.

A. MACDERMOTT

## QUERIES

**11. (1959.) THREE-GUN SALUTES.** A document dated 11 October 1641 states: 'At our going off the Fort, against which our pinnace ankered, saluted my Lord Marshall with 12 greate guns which he answered with 3.' Again, Philips in his *Journal of the Expedition of Lord Anson* writes: 'He saluted us with eleven guns and we returned the salute with three.'

Can any reader explain the 3-gun return salutes and the odd and even number given the senior?

EDGAR K. THOMPSON

**12. (1959.) DANUBE FERRIES.** While travelling recently on the Danube between Passau and Vienna I noticed a type of ferry-boat in common use at river crossings employing a system of propulsion which I have not previously encountered. A cable is slung across the river either from pylons or rock faces at a suitable height to clear passing steamers and a wire from a free-running pulley on the cable leads down to a hook attachment on the bow of the ferry. To cross the river the ferryman merely hooks the wire to an eye or frame on his port or starboard bow depending upon which is the up-river one and pushes off, steering the boat at a slight upstream angle; the fast current passing at an angle down his upstream side edges the boat smoothly and efficiently across the river as the pulley runs along the cable above and somewhat upstream of him. To return, he shifts the hook to the other bow and reverses his helm and if he wishes to stop in midstream he centres his rudder and holds the boat head to stream. This 'current-sailing' principle is employed equally by small wooden ferries and quite large steel vehicle-transporters on the Danube

in Austria and it would be interesting to know of other European examples. I believe the Swiss also use the idea but though extremely simple and economical it does not seem to be widely known. Where and when did the idea originate?

JAMES LIGHTFOOT

**13 (1959.) GARIBALDI AND THE CONFIDENCE.** A correspondent on the 'Log Book' page of the *Liverpool Weekly Post* of 27 June 1936 related the story of how Garibaldi once escaped from an unnamed Italian port by being concealed on board the schooner *Confidence*, Captain Lewis, of Portmadoc. The same story is referred to on p. 89 of *Immortal Sails* by Lieut.-Col. Henry Hughes, who states that the port from which Garibaldi escaped was Reggio. In neither account is any date given. Can anyone say at what period in Garibaldi's life this incident is supposed to have occurred? The *Confidence* was built at Pwlheli in 1845.

MICHAEL R. BOUQUET

**14. (1959.) NAUTICAL TERMS.**

What is a scran-bag?

Why were washerwomen in the old days of the Royal Navy referred to or called Lady Rodney?

What is meant by the expression Quarter Waggoner?

What is the difference between Under Weigh and Under Way?

These questions are a product of my interest in and reading of old books about naval history. I trust your many readers will be able to contribute some enlightenment.

B. LOW. KINGSTON

**15. (1959.) COURTS MARTIAL.** In a court martial of an officer in the R.N. if he is found guilty, the point of a sword is towards him as he enters the room. Can any member contribute light on the origin of this custom?

EDGAR K. THOMPSON

## ANSWERS

**2. (1954.) U.S.S. KATAHDIN.** A member inquired if an American reader might supply some details concerning the U.S.S. *Katahdin*. Research at the Navy Department has developed data which should be of interest to students of naval history.

The *Katahdin* was the second ship in the United States Navy to bear this name. She was named from a 5000-foot mountain in the State of Maine. This unusual warship was designed by Rear-Admiral Daniel Ammen, U.S.N., and during the construction stage was designated the Ammen Marine Ram. Admiral Ammen was prompted in his project by recalling the battle of Lissa in the Adriatic where the Austrian flagship *Ferdinand Max* had rammed and sunk the Italian flagship *Re d'Italia*. Ammen believed that the tactic of the ram was the tactic of victory and that the U.S. Navy should have a just proportion of ships equipped for ramming. On one occasion, speaking of the ram, he said: 'Her engagement with an ironclad ship of the type of the majority of those most prized by the transatlantic naval powers would be analogous to a combat between a swordfish and a whale.'

U.S.S. *Katahdin* was an armoured harbour-defence ram built by the Bath Iron Works under authority of Congress approved 2 March 1889. She was launched at Bath, Maine, on 4 February 1893 and completed three years later at a cost of \$930,000. Her naval mission was to defend approaches to sea-board cities. This ship was in herself a projectile and not a vessel intended to mount guns or serve as a base from which projectiles could be fired.

This curious ship was of 2183 tons; length 250 ft.; breadth 45 ft. 5 in.; draft 15 ft. She was equipped with twin-screw vertical triple-expansion engines of 5067 horse-power and three vertical Scotch boilers. Her designed speed was 16 knots, which was never obtained, and her bunker capacity was 192 tons of coal. The curved deck, as well as her sides, were armoured, the plates varying in thickness from 2 to 6 ins. Her offensive power lay wholly in her speed and ram, the four 6-pounders with which she was equipped were intended only for use in repelling torpedo

boat attacks. Her complement was 7 officers and 90 men. Her general shape was comparable to that of a gigantic cigar or vastly elongated turtle.

This ironclad-ram was a complete iron shell, whose cross-section approached the form of an ellipse and her longitudinal midship section was not essentially different from that figure. She rode low in the water, the upper and exposed portion was completely encased in deflecting armour securely laid upon a heavy wooden backing. Armour was regularly diminished over the crown of the deck and but for 2 ft. vertically above the water line it maintained a maximum thickness of 3 in. The submerged portion of armour increased in thickness from 1 in. at a depth of 5 ft. 6 in. to 3 in. at the apex of the sponson where it and the convex armour of the deck met in a sharp edge. The cylindrical pilot-house of steel, 12 ft. 6 in. in diameter at outside and 20 in. thick, stood on the crown of the deck sheltering the helmsman and protected the funnel which passed up through it. The ship, at the forward end, tapered uniformly to a point and terminated in a heavy cast steel head. In this was mounted a removable point or die of hammered steel, hardened and tempered. It was slightly cupped at the end so as to present a chisel-like circumference. The intention of this being that should impact be had with an inclined surface, the die would not slip but bite at the instant of contact, thus enabling the ram to successfully strike an enemy ship at an angle not less than forty degrees.

The hull was formed upon the bracket and longitudinal girder system. Girders were of plate iron, 20 in. deep, 20 in number, distributed all around the hull and terminating forward on the cast steel head referred to above. This construction not only afforded the greatest strength with the least weight, but running as they did, fore and aft, and being directly attached to flanges on the cast steel head, the shock of a blow given, as a ram, was distributed equally over all portions of the structure. A double bottom ran the entire length of the ship. At a distance of 25 ft. from either end, a water-tight partition was formed of iron plating, completely separating the end spaces from the interior of the vessel. Between these partitions were two longitudinal bulkheads in reality, vertical continuations of the inner bottom, running fore and aft at a uniform distance of 3 ft. 9 in. from the outer shell, thus adding greatly to the general strength of the ship; assisting in the distribution of the shock resulting from impact and providing security against torpedo attacks or any contingency that would occasion a fracture of the outer shell of the vessel.

On the sides, the deck terminated on a V-shaped projection, measuring 3 ft. beyond the vertical line and presenting an angle of about thirty degrees to a broadside approach. This space was solidly filled with hard wood, the deck armour gradually thickening to six inches and ending in a heavy cap-piece on which both side and deck armour joined. This V-shaped projection was carried all around the vessel, the penetrating portion of the ram being widest horizontally and not vertically as was the case with most of the ironclad vessels of European navies. The effect being not only to add strength in the direction most required but in the event of delivering a penetrating blow to a vessel in motion, the act of disengaging would tear and enlarge the opening already made.

There were only two ways to pass from the after part of the ship to the forward part or vice versa. On deck, one might walk the gratings laid longitudinally along the curve of the turtle-back to form a sort of boardwalk. Below, one had to move through a series of compartments that formed a passage-way much resembling the interior of a watermain, for the passage was nowhere more than  $5\frac{1}{2}$  ft. high and nowhere more than  $4\frac{1}{2}$  ft. wide. Steel bulkheads walled it in.

When the *Katahdin* was completed, the U.S. Navy declined to accept her as she did not meet the specifications as to speed. The builder entered into negotiations with Venezuela to purchase the ram but as that country was then involved with both England and France in an explosive political situation, the United States Government finally accepted the ship to prevent her passing to the control of Venezuela.

On 20 February 1896, the U.S.S. *Katahdin* was commissioned at the New York Navy Yard. On the outbreak of War with Spain in 1898, she was refitted for active service and attached to the Flying Squadron of Commodore Schley. Her war service was limited to patrols off the New England coast between Vineyard Haven and Providence, Massachusetts. Upon the termination of the war in 1898, the *Katahdin* was laid up in ordinary at the Philadelphia Navy

Yard where she remained for the next ten years. When at sea in anything but a millpond, she was certain to steam, in the quaint phrase of her first commanding officer, at least, 'half seas under'.

Rear-Admiral David Porter, U.S.N., who served in the *Katahdin* when he was an Ensign, wrote: 'The *Katahdin* was a vessel such as never before had been seen on sea or land. And even its approximate like was not to be seen again until the submarine projected itself into the maritime world. This ship had an astonishing resemblance to Captain Nemo's undersea ship *Nautilus*, as depicted in Jules Verne's prophetic phantasy *Twenty Thousand Leagues Under the Sea*. And the *Katahdin*'s mission was the same as that of the imaginary *Nautilus* namely, to destroy an enemy vessel by ramming it.'

Because of the eccentricity of her design, living in the U.S.S. *Katahdin* was not the most comfortable thing in the world. She was probably the most uncomfortable warship ever to fly the American flag. Even in mild weather, all hatches had to be closed while the ship was under way because of her little freeboard. There was no artificial ventilation and below deck the temperature was of tropical fervour. The Wardroom usually was as hot as 110 degrees while in the galley it attained 125. What the temperature was in the stokehold is not recorded.

In ramming exercises, the *Katahdin* steamed at full speed and 10 sec. before striking the target, a whistle was blown whereupon all hands, except those in the conning tower, flung themselves flat on the deck.

In July 1909, the U.S.S. *Katahdin* was stricken from the Navy List and turned over to the Bureau of Ordnance for experimental purposes. All during 1910, she was designated Target A and used at the naval proving range to test the effect of the new 14-inch shells. In December 1930 bids were requested for disposing of the wreck of U.S. Target 'A' (ex-naval ram U.S.S. *Katahdin*) at the mouth of the Rappahannock River. This was the prosaic end of 'Half Seas Under' which in her time had been a most revolutionary warship but which had failed to meet the requirements of modern warfare.

It was fortunate that the U.S.S. *Katahdin* was a failure. Her success, although temporary, might have prolonged the belief in the tactic of ramming and thereby vitally delayed the development of the long-range hard-hitting guns that soon became the reliance of the U.S. Navy and other naval powers of the world.

EDGAR K. THOMPSON

**10. (1958.) THE SETTING OF GAFF TOPSAILS IN SCHOONERS.** From service in American schooners (Atlantic and Pacific coastal) I have some familiarity with the practice of setting gaff topsails, particularly dipping the tack between the peak halyards and the gaff. My service was before the mast and it fell to our lot to shift the heavy chain-sheets, haul the tack over the triatic-stay and toss the coil to the deck with a cry of 'Sheet home!' I had done this on numerous occasions, day and night, in big four- and five-masters and although it is more than thirty years ago, I could describe it in detail.

Nova Scotian and American schooners always dipped the tack between the peak halyards and the gaff so that, as Mr Basil Greenhill describes it, 'the lower part of the sail was on the weather side of the gaff, the upper part to leeward of the peak halyards'. I never asked the why and wherefore of this but I am certain it was done to enable us to haul the topsail down flatter. And as is pointed out, the topsail had to be clewed up and reset every time the ship went about. On a beat, on short tacks, topsails were usually kept furled in the crosstrees, but if they were set, the tacks would be left standing. It depended on the pleasure of the Old Man.

Some of my yachting friends assured me that when gaff topsails were carried in racing a lively hand was kept aloft for the purpose of 'shifting topsail tacks'. He described this as standard procedure in Harold (Mike) Vanderbilt's big schooner *Vagrant*, in 1919. It was also the practice in the celebrated Fishermen's races between *Gertrude Thebaud* and *Bluenose*, when the utmost of effort was extracted from every sail. I hesitate to expound too emphatically but as I said, it was the practice I saw in two four-masters and three huge five-masters in which I served. I gathered from older shipmates that it was never otherwise.

ARCHIE HORKA

Since writing the query which was printed in No. 3 of Vol. 44 of *The Mariner's Mirror* I have read *Neath Swaying Spars, the Story of the Trading Scows of New Zealand*, by P. A. Eaddy.

In this book there are a number of illustrations of New Zealand ketch-rigged scows which clearly have their gaff topsails set in the manner described in my query, while opposite page 33 is a photograph of the topsail schooner *Clio* (she is really a ketch) with her main gaff topsail set in this fashion (and showing signs of extensive damage where it worked against the peak halyards).

In Church's *American Fisherman* there are a number of photographs of New England schooners racing in the international contests with their gaff topsails set in this way.      BASIL GREENHILL

These notes were prepared after a conversation with an old sailor who spent a number of years in North-East coast sailing vessels around the turn of the century.

I asked this gentleman what he could tell me about the setting of gaff topsails, and he immediately explained the method described by Mr Greenhill in his opening remarks on this subject. Furthermore, he was able to illustrate this method by reference to a picture of the *Lady Constance* which looked down on us from the wall. As mate he had converted the *Lady Constance* from a brig to a brigantine and this picture—'painted by a sailor who knew what he was about'—showed the tack of the gaff topsail obviously taken down the weather side. He always set them that way and thought it was usual on this part of the coast (Whitby to Blyth).

For going about, except on very short tacks such as might be made in a river, the lower part of the gaff topsail was taken over the peak halliards, by a man sent aloft, and reset with the tack taken back under the peak halliards and over the gaff to come down on what then becomes the weather side. This disposes of the idea of it being a lazy man's system.

The only reason for setting the gaff topsail in this manner was that of efficiency. It could be hauled flatter, and with the foot of the sail kept close to the gaff the wind would not pass out of the sail in a downward direction but away to the aft. I understood my friend to suggest also that with the gaff topsail tack taken down the leeward side both the gaff topsail and the mainsail or spanker would be more prone to shaking. Whether this would be caused by the downdraft of air *behind* the mainsail, i.e. on the leeward side, I cannot say but I was assured that this would make the vessel that bit more difficult to handle under certain conditions.

I hope I have been able to throw a little light on this problem but if this explanation is still somewhat obscure the fault will be mine in recounting a technical point on which I have no personal experience.

PETER BARTON

**12. (1958.) Scow-schooner.** Scow is derived from the Dutch *schouw*, a large flat-bottomed river boat, usually serving as a ferryboat or lighter. The *Dictionary of Americanisms on Historical Principles* lists the earliest reference in America as 1669. In Munsell's *The Annals of Albany* for 1669 we read: 'The Governor had given me Orders...to provyde a scow to help ye soouldiers in their provision of fire wood.'

Scow was used attributively with schooner in Jack London's *Valley of the Moon*: 'At the foot of Castro street...the scow schooners, laden with sand and gravel, lay hauled to the shore in a long row.'

A schooner is a fore-and-aft-rigged vessel, originally having but two masts with the smaller sail on the foremast. This word is a pure Americanism and is believed to have originated about 1713, but the earliest recorded reference is 1716 as reported by the *Boston Record* for that year: 'James Manson ye skooner Mayflower from North Carolina.'

EDGAR K. THOMPSON

**13. (1958.) ORIGIN OF THE TERM JURY-RIG.** The word *jury* on *jury-mast*, *jury-rudder* and *jury-rigged* all mean some temporary arrangement or measure to last for the occasion. I lift the following from Notes and Queries, Vol. 5, 9th series: 'Harris in his *Lexicon Technicum*, the great forefather of all encyclopedias, explains *jury-mast* as properly *durée mast* or *mât de durée*, a mast made to last for the present occasion. The *Encyclopædia Londinensis* (1812) and the *Encyclopædia Perthensis* (1816) accepted without hesitation Harris's decision.' Another explanation which has not received wide acceptance is that *jury* is derived from the Norman French *Jur*, *Jura*, a day, implying a temporary mast, a mast for a day.

EDGAR K. THOMPSON

**14. (1958.) SHIP *CHEVIOT*.** Lloyd's List for 1862-3 gives this ship as built at Quebec in 1853, registered in Glasgow, owner D. Swan, master J. Orkney, voyage Liverpool-New Zealand. Dimensions from later lists 183·1 ft. by 43·7 ft., 1040 tons. She is last listed in 1869-70, still with the same owner and master. Another *Cheviot* had been built in 1862 for Smith of Newcastle.

R. C. ANDERSON

**16. (1958.) THE KENSINGTON STONE.** Commander Clissold can rest assured that the 'Kensington Stone' is a forgery. It seems to have been perpetrated in the last decade of the nineteenth century by a Swedish immigrant on the basis of an elementary handbook, a copy of which has even been reported as having come to light in the immediate vicinity of the 'find'. The numerous anachronisms of script and language have been made the subject of a special study by the great Swedish runologist Professor Scen B. F. Jansson, and his case against the authenticity of the stone must be considered conclusive ("Runstenen" från Kensington i Minnesota', *Nordisk Tidskrift*, 1949, pp. 377-405). It is safe to say that the circumstantial evidence is even more damning than the internal evidence, but if I myself had to single out any one argument I would rely on the implicit blasphemy of the formula '*A V M fräelse af illy*'. Duns Scotus himself would never have thought to go so far, but the impropriety would not have been apparent to the nineteenth-century forger who probably thought that the formula gave a convincingly Mariolatrous flavour to his fabrication.

R. H. M. DOLLEY

Commander Clissold is correct in stating that the authenticity of the Kensington Stone has not been definitely established. The arguments in its favour, however, appear to outweigh those to the contrary. A most interesting and detailed description of the finding of the Stone—and its subsequent history is given in Paul Hermain's book *The Conquest by Man*, published in English about 1954.

I cannot recollect the exact details given by the author—but briefly this is what occurred. About 1892 a farmer clearing his land in Minnesota found a large flat stone embedded in the roots of a tree which he had just felled. He noticed that one flat surface was covered with symbols unknown to himself. Being primarily a farmer and not a Savant he thought no more of the matter—other than to use the stone in question to fill up a hole in front of his house. Luckily he placed it face downwards!

Some time later he was visited by a friend interested in historical matters—and in due course the stone was dug up once more and shown to the latter—who at once recognized the markings to be those of a Runic character. This fact is not as extraordinary as it may seem. Since the bulk of the early settlers in Minnesota were of Scandinavian origin.

The finder of the stone agreed to it being taken away for expert examination—and it was discovered that the writing was executed partly in Runic and partly in Latin characters.

As far as I can recollect the translation stated that a body of Norsemen had advanced up what is now the Red River into modern Minnesota—and now found themselves isolated on a small skerry (island), and in immediate danger of death by the Skraelings (savages).

Sworn statements were taken from the original finder and several other reliable witnesses.

One point, however, of very considerable importance emerged from the enquiry—and that was that the age of the tree in whose roots the stone had been found was at the time of its felling some 50 years old. This postulates that the hoaxter (assuming the stone to be a forgery) must have buried it not later than the year 1840, i.e. 18 years before Minnesota was admitted to the Union in 1858; and at a time when only Indians and buffaloes roamed the neighbourhood.

To me, at least, it seems incredible that anyone in 1840, when only the covered ox wagon was available for transport, would go to all the trouble of preparing a hoax of such an erudite character in a part of the States practically unknown to white men.

I understand, however, that some experts claim that the characters are too modern and are not of the archaic type in use in the early fourteenth century. Be that as it may—I still find no insuperable difficulty in accepting the fact that a small body of Norse explorers entered Hudson Bay—and from there passed up the many waterways to Lake Winnipeg—and from thence up the Red River into Minnesota.

A matter which has some bearing on this question is the fact, now generally accepted by Norse scholars, that the norsemen of the Western Settlement in Greenland (i.e. the northernmost of the two separate colonies in that island) were compelled to leave their homes early in the fourteenth century, owing to the severe climatic conditions obtaining there. These had deteriorated very considerably since the time of Erik the Red in 982.

It is not unreasonable to assume that they crossed the Davis Strait which is only 500 miles wide at that point—and eventually found their way to the Southern end of Hudson Bay. This voyage compared to the voyages to and from Norway, was a comparatively easy one—and was, no doubt, undertaken only after successful reconnaissances.

Apart from the Stone under consideration—several Norse axes have been found buried in the ground in Northern Ontario—all of which goes to prove that the Greenlanders in all probability explored northern Canada—long after Helluland, Markland and Vinland had become shadowy memories enshrined only in the Icelandic Sagas.

H. A. JOLY DE LOTBINIERE

**17. (1958.) 'DRAKE'S TABLET.'** This plate, which was brought to light in 1936, is now displayed in the Bancroft Library of the University of California at Berkeley, California. It was subjected to careful metallurgical scrutiny, the results of which were published by the Californian Historical Society in 1937, and it is generally accepted in California as authentic. JOHN LYMAN

The finding of this tablet was reported in Special Publication No. 13 of the California Historical Society, entitled *Drake's Plate of Brass*, April 1937. Tests for its authenticity were recorded in Special Publication No. 14, *Drake's Plate of Brass authenticated*, 1938. These two, with additions, were republished by the Society in 1953 under the title *The Plate of Brass*. The California Historical Society was perfectly satisfied with the result of the investigation, but the National Maritime Museum has in its possession a report originating in this country which seems to throw some doubt on some of the conclusions reached.

W. E. MAY

'Drake's Tablet' is the property of the University of California, and is kept in the University Library at Berkeley. It is generally accepted as an authentic relic of Drake's landing on the coast of California in 1579.

A popular but detailed and accurate account of the discovery of 'Drake's Tablet' may be found in the *Saturday Evening Post* issue of 3 April 1943, written by Professor Joseph W. Ellison of Oregon State College under the title 'True or False?' After reviewing the pros and cons of the matter, Professor Ellison writes: 'The evidence in favor of the authenticity of the plate, though not absolutely conclusive, is quite convincing.'

A briefer reference citing many earlier publications on the subject, is contained in Robert F. Heizer, *Francis Drake and the California Indians* (University of California Publications in American Archaeology and Ethnology, Vol. 42, No. 3, 1947), pp. 254–5. Professor Heizer writes: 'Although some skeptics have questioned the genuineness of the plate of brass, they have not altered the facts establishing the plate's authenticity as shown by the investigations of such scholars as Allen Chickering, Professor Herbert E. Bolton, and Drs Fink and Polushkin.'

I have been unable to find in the *Geographical Magazine* the relation of the discovery to which Commander Clissold refers, but if his summary is correct, the relation is in error. The plate was found on two different occasions: first (in 1933 or 1934) near Drake's Bay, but not by a picnicker; again (in 1936) by a picnicker, but not near Drake's Bay.

OLIVER DUNN

The brass plate alleged to be that left by Drake on the coast of California was discovered there in 1936 by Mr B. Shinn, though it would appear it had also been seen there a few years earlier. A number of contributors gave money for the purchase of this item from the finder, and it is now in the Bancroft Library in the University of California.

There are short articles on the subject in the *Geographical Journal*, Vol. 91 (1938), pp. 543–5 (*Drake's Plate of Brass* by J. A. Williamson), the *Geographical Magazine*, Vol. 23 (1950–1), pp. 448–53 (*Drake's Plate of Brass* by Dorothy Carrington) and the *Canadian Geographical Journal*, Vol. 27 (1953), pp. 36–9 (*Elizabeth, Queen of California* by Corday Mackay). A book

*Drake's Plate of Brass* was published by the California Historical Society in 1937, and Robert F. Heizer's *Francis Drake and the California Indians, 1579* (University of California Press 1947) has several references to the plate, including, on pp. 254-5, notes of several articles in American periodicals. The general opinion of these accounts, all of which may be seen in the Library of the Royal Commonwealth Society, is in favour of the genuineness of the plate, but there have been some suggestions that it is a fake.

DONALD H. SIMPSON

For full details of this bronze plate see *The British Columbia Historical Quarterly Magazine*, January 1939, pp. 151-76, by the late Captain R. P. Bishop, B.C.L.S., F.R.G.S., of Victoria B.C.

As I have lived at Victoria since 1911, I well remember the stir made on the discovery of the tablet. To cut a long story short here is an extract from page 162.

'A plate of brass bearing the above inscription was picked up by the late Mr Beryle Skinn in 1936 and handed to Doctor H. E. Bolton (professor of American History at the University of California). It was subsequently ascertained that the plate had been found a few years before near Drake's Bay and thrown away near San Francisco Bay, not far from the spot where Skinn found it. The plate and the lettering have been carefully examined by Professor Fink of Columbia University, and other experts and the question of its authenticity now appears to be finally settled (for the complete analysis and report, see Colin G. Fink and E. P. Poluskin, *Drake's Plate of Brass Authenticated*, San Francisco, 1938).

"This important find is described by Professor Bolton in his paper "Francis Drake's Plate of Brass" read before the California Historical Society in 1937. He points out that "The World Encompassed" and the other accounts vary on vital matters in describing the plate, the inscription and the sixpence.

"Here is the inscription on the brass; "Be it known unto all men by these presents / June 17 1579 / By the grace of God and in the name of Herr Majesty Queen Elizabeth of England and Herr Successors forever I take possession of this kingdom whose king and people freely resigne their right and title in the whole land unto herr Majesties keeping now named by me and to be known unto all men as Nova Albion.

Francis Drake."

F. V. LONGSTAFF

**18. (1958.) THE SALAMIS.** According to Jane's *Fighting Ships*, 1916, this ship was launched on 11 November 1914. Whether she was to have been a battleship or a battle-cruiser must be a matter of opinion. If she had been delivered to Greece and the *Erin* and *Agincourt* to Turkey, she might have been considered a battle-cruiser as being slightly faster and less heavily armed and/or armoured. On the other hand, in the North Sea with battle-cruisers of 28 knots or so as her possible opponents she would have had to be looked on as a fast but otherwise rather inferior battleship.

There had been similar cases before her time. The Russian *Peresviet* of 1898 was described as 'an armoured cruiser masquerading as a battleship', while the Japanese *Tsukuba* of 1905 was called by the same writer, F. T. Jane, an 'armoured ship' because he was uncertain in which class to put her. Further back still it must have been hard to say how some Italian ships should be described. The point is not important; they were all 'capital ships' in their day.

The reason why she was never completed was probably that the American guns—and presumably their mountings—intended for her were not delivered to Germany, but used in new British monitors. It may also have been felt that with a speed inferior to that of battle-cruisers and armour less than that of battleships there was no place for her in the High Seas Fleet.

R. C. ANDERSON

*Salamis*, launched 1914, was ordered by Greece in 1912 as a result of the war with Turkey. At the same period they purchased two old battleships from the United States and a light cruiser from China.

*Salamis*, like other vessels built for minor navies, was smaller than her contemporaries in the larger fleets, perhaps because of financial limitations. Her dimensions of 570 ft. x 82 ft. x 25 $\frac{1}{2}$ , 19,500 tons are close to the German *Von der Tann*'s 562 ft. x 87 ft. x 26 $\frac{1}{2}$ , 19,100 tons. The German

battlecruiser was launched five years earlier. *Derfflinger*, launched 1913, displaced 26,180 tons, and H.M.S. *Tiger* of the same year displaced 28,500 tons. Her machinery of 40,000 horse-power for 23 knots is comparable to *Von der Tann's* of 43,600 horse-power for 24 knots. The length/beam ratio and speed/length ratio are in the battle-cruiser range. For these reasons she should be considered a battle-cruiser smaller than her contemporaries but capable of performing the functions of a battle-cruiser in her area of the Mediterranean Sea.

The primary armament was eight 14 in. guns ordered from Bethlehem Steel Co. The American firm sold them to the British who mounted them in monitors of the *Abercrombie* type. The gun calibre did not correspond to anything in the German fleet, and it is probable that the turrets, ammunition handling, magazine arrangements, etc., were foreign to the German practice. This would preclude adopting *Salamis* for the German 11-in. or 12-in. guns without extensive rebuilding. Gun mountings have usually been the controlling item for completion of capital ships (see Parkes's *British Battleships* concerning H.M.S. *Vanguard* of 1940 which used the World War I guns from *Courageous* and *Glorious*). It appears probable that with guns being in short supply the Germans decided to devote their efforts to their own designs such as *Hindenburg* of 26,600 tons instead of altering *Salamis* of 19,500 tons.

V. C. DARNELL

## REVIEWS

**BRITISH WARSHIP NAMES.** By Captain T. D. MANNING and Commander C. F. WALKER. Foreword by Admiral of the Fleet Earl Mountbatten of Burma. Putnam and Co.  $8\frac{1}{2} \times 5$  inches, 498 pages. Price 42s.

This admirable book is an illumination of the truth that it is the duty of everyone who has taken part in a useful and specialized work for the Navy, not cloaked by Security, to publish an authoritative account of his doings in the interest of history.

Both Captain Manning and Commander Walker were members of the Admiralty Ship Names Committee which (under the chairmanship of Admiral Sir Geoffrey Blake—to whom their book is dedicated) saw to it that in World War II, British men-of-war were christened appropriately. Another member was L. G. Carr Laughton, then temporarily in charge of the Admiralty Library, on whose store of out-of-the-way naval history they were able to draw. They had a certain amount of material to help them: memoranda of earlier bodies; a limited policy guidance inherited from Lord Beatty, and a few specialized published works, of which Prince Louis of Battenberg's *Men-of-War Names* was the most useful. It is fitting that the Prince's son, lately First Sea Lord, should give his blessing to their record.

The preliminary chapters treat of the significance of names, type names and how they have been evolved, and they include an account of the joint authors' own work at the Admiralty, as is most proper: but the core and supreme justification for the book is the dictionary of warship names which occupies much the greater part. This will remain invaluable, since the information includes the origin of names, the dates of launching of the larger ships which have successively borne it, and a list of battle honours, though excluding, alas, single-ship actions, which is the only respect in which, from reasons of space, it is seriously incomplete. For instance, in the case of the *Unicorn*, her Battle Honours, from the 'Armada, 1588', to 'Korea, 1950–53', are duly listed, but not the actions of 1761 and 1796 with the *Vestale* and *Tribune* respectively.

There will be some natural disappointment that 'it was decided that the smallest ships to qualify for mention should be the sloops of the old Navy and the corvettes of the new', though, again, the reason of cost is a cogent one. But it means the exclusion of such popular old stalwarts as, for instance, the *Halcyon*, which up to the opening of World War I was the means of their first introduction to the Navy to countless visitors to Lowestoft, where she was stationed for years on fishery protection work, and where for one glorious hour she saw action with major war vessels of the German fleet. Other cases will recur to mind.

The authors refer to the keen personal interest in ship-names of the late King George VI. He had been trained as a sailor, and knew a great deal of naval history, which was always at his finger-tips, as had been so with his father. This was well known, and it was characteristic both of King George VI's personal modesty and his sense of the fitting that he preferred that the first capital ship to be launched during his reign should be called *Duke of York* rather than by his regal title. It commemorated not only his own earlier services, but those of James II during his active years in the Navy of his brother, Charles II.

Curiosities abound: for instance, the persistent official mis-spelling of the name *Abercromby* as *Abercrombie*, which has long had the sanction of custom; the fact that there is a gap in the *Ark Royal's* battle honours, for all her fame and popularity, between the 'Cadiz 1596' and the Dardanelles 1916'; the astounding record of successive *Warspites*; the fact that 'Toulon 1744' appears among the *Berwick's* honours, though Toulon was a dismal encounter and only Hawke in the *Berwick* won any credit there—and as many more as the reader discovers, fresh ones at every reading! In fact, with this book on his shelves, with Captain Weightman's *Crests and Badges of H.M. Ships* beside it, the student of picturesque nautical detail, redolent with history and uplifting to morale, is twice blessed. He never need have a dull evening.

OLIVER WARNER

### MIDDLE ENGLISH SEA TERMS. Part 2. By B. SANDAHL. Upsala, 1958. 9½ × 6½ inches; 151 pages. Price 18s.

When Part 1 of Mr Sandahl's work was reviewed in 1951 the fact that it dealt only with words connected with the ship's hull was overlooked. Now we are given an equally thorough study of those to do with Masts, Spars and Sails, and are promised further instalments on Rigging and Cordage, Fittings and Equipment and finally the Working of the Ship.

If only Mr Sandahl were resident in England, a great part of the work in connexion with our proposed *Nautical Dictionary* might well be turned over to him. As it is, our own lexicographers will certainly have to keep his two volumes close at hand. They may even feel inclined to wait for him to finish his study! In any case all those interested, either in words as such or in the ships of the fourteenth and fifteenth centuries, would be well advised to obtain copies of both parts available at present.

All our old puzzles—luff, watersyle, wynewes, the priority of fore or mizzen mast and many others—come in for attention and have new light cast on them. As was the case in Part 1 we find constant references to *The Mariner's Mirror* and to opinions expressed therein, sometimes agreeing and sometimes disagreeing with those opinions, but always giving very good reasons for the decision reached.

The production of the book is well up to the high standard set by Part 1. Evidently printers' costs in Sweden are following the same course as those here, for this volume, roughly two-thirds the size of its predecessor, costs 18s. as against 14s. It may be mentioned that either volume may be obtained (with 1s. added for postage) from the author at Hallbygatan 28A, Upsala, Sweden.

R. C. ANDERSON

### EPICS OF THE SQUARE-RIGGED SHIPS. By C. W. DOMVILLE-FIFE. Seeley Service and Co, London. 8½ × 5½ inches. Price 25s.

As in Mr Domville-Fife's previous book on this subject (*Square-Rigger Days*), this one is a collection of yarns about deep-water sailing ships written mainly by men who sailed in them. These authentic stories of sailing-ship life will certainly interest anyone with a liking for 'Sail'. The twenty-two chapters cover events afloat from the time of the famous tea clippers up to the thirties of this century. Some of the stories are of American and other foreign ships, but the majority are of British vessels, among them many well known names.

The vicissitudes, pleasant and otherwise, of sailing-ship life are recorded; from flying-fish weather in the Trades to prolonged calms and hurricanes, fires and foundering, shipwreck and starvation, mutiny, murder and disaster.

Chapter 2 is a good account of the loss in 1906 of the four-master *County of Roxburgh* on a reef in the Pacific. (The wreck is still there; high and dry.) Chapter 3 tells of the loss in 1878 of the *Loch Ard*, wrecked on the Australian coast at the end of a passage from London with the loss of all hands, passengers and crew, with the exception of two people, a young man and a girl. Chapter 5 is the story of a phenomenally long passage (259 days) by the American skysail-yard full-rigged ship *T. F. Oakes* in 1897. She was bound from Hong Kong to New York and made the passage by the unusual route via Cape Horn. The loss of the ship *General Grant* of Boston and the hardships suffered by the survivors on Auckland Island south of New Zealand, are described in chapter 9.

Chapter 13 is an account of the great Krakatoa eruption in 1883, as experienced in a ship in the vicinity. Other chapters tell of the conditions of passenger life on the long voyage to Australia under sail, and of the lives afloat of the wives and families of ship's masters in those days.

Two good yarns, chapters 17 and 18, are about Devitt and Moore's famous sail-training clipper, the *Illawarra*. There are two chapters concerning the *Garthpool*, the last of the British deep-water square-rigged ships, stranded and lost on the Cape Verde Islands in 1929. Incidentally, the author gives the height of the Peak of Teneriffe as 7000 ft. It is over 12000 ft. The last chapter is called 'Valhalla of Sail' and describes how, at the end of the 1939-45 war, a one-time square-rig sailor came across the names of many old sailing ships painted by their crews years ago on a long wharf in some Australian harbour. He gives, where possible, events in the history of these ships. It would have been of interest to know the name of the port in which this long wharf was situated. There seems no reason for his having omitted it. At the end of this chapter is a pretty tall yarn. It is, of course, based on hearsay, but the account of a man of seventy years of age swinging an 'eighty-pound double-bladed broadsword' takes a bit of swallowing.

Not all the stories are of trouble and disaster. There are descriptions of fine-weather sailing under ideal conditions, and here the great difference between sea-faring under sail and in steam-ships is shown. The voyager in sail saw much more of the animal and bird life of the ocean, for the ship's silent progress did not frighten them away. Also the seaman's work was in many ways more skilled and interesting.

There are eighteen excellent photographs of sailing ships, of which the frontispiece showing the four-masted barque *Carradale* under full sail is perhaps the best. A good lively picture. Another first rate one is of the deck of the *Garthpool* in heavy weather; also that of the four-masted barque *Ponape* is a splendid picture of power and speed under sail. A fine aerial view of the *Pamir* under full sail is rather spoilt by being so crowded on the page that her Royals are cut off by the binding edge.

Naturally, some of the yarns are much better written than others: it is surprising to see on page 15 that the word 'knots' is used where 'miles' is meant. Also it is a bit tedious to read the surely ridiculous statement that some shipmasters 'put padlocks on the sails' to prevent them being taken in without orders. We have often heard this 'padlocked halyards' story, but never at first hand, for surely no master mariner would be such a fool as to run the risk of being dismasted by a squall or a shift of wind on a dark night, while someone tried to find the padlock key! In one of the stories it is stated that in 1888 a ship experienced a wind velocity of 110 miles an hour. How could this have been measured?

There is an index of the ships, ports and people mentioned in the stories. The names of many well-known vessels are among the ninety-seven listed.

The book is a good collection of sea stories of the days of sail, and can certainly be recommended.

DRAWINGS OF 'CUTTY SARK'. By G. F. CAMPBELL. Whitstable, Kent.  
 3 sheets,  $23\frac{1}{2} \times 28\frac{1}{2}$  inches. Price 30s. per set.

It was a very fortunate coincidence for the Cutty Sark Society that at about the time the scheme for the restoration of the ship was mooted Mr G. F. Campbell should have taken a position on the staff of the L.C.C., who had accepted the responsibility for carrying out the work. There are not many people with Mr Campbell's knowledge of the sailing ship, especially from a constructional point of view. Moreover, as his interest in the old ships was backed by his training as a naval architect he had not only the knowledge of the old ships but the ability to make working drawings of the almost innumerable parts of which the ships consist. In the restoration of *Cutty Sark* he was able to analyse the drawings from which the ship was built, and to interpret the working instructions that went with them, as few would have been able to do.

When the restoration of the ship was complete Mr Campbell prepared a set of drawings in which practically every feature of the ship is shown. As Mr Campbell is probably the only person in a position to do this, the value of these drawings, both as regards the ship for her own sake and as a representative of one of the most interesting types of ship ever built, can hardly be exaggerated. His superiors may have had a broader picture of the restoration as whole, but none of them had had to go into such detail with every individual part as had Mr Campbell.

The set of drawings consists of three sheets, and, generally speaking, they are made to the scale of  $\frac{3}{2}$  in. = 1 ft., which is large enough to show things clearly and small enough to get the whole ship on a conveniently sized sheet of paper—actually about 30 by 24 in. Various details are shown to larger scale. The bow and stern decoration, the deck details, the mast and spar fittings and the boats are drawn to  $\frac{1}{4}$  in. scale, and certain other details to an even larger scale. The bow and stern decoration was a great feature of the clipper ships, and in a model of a ship like *Cutty Sark* it is important to have it correct. These are taken from the actual drawings made when the original idea of a frieze with witches wildly dancing was abandoned in favour of something more orthodox.

Sheet 1 is devoted mainly to the hull. The hull lines are given, and also the external profile, and a longitudinal section through the centre-line of the ship which shows the general construction very clearly. Two deck plans are given, one showing the main deck with the accommodation in the cabin and the deckhouses, and the other the poop and fo'c'sle head. A useful drawing is that showing the inside of the port bulwark. I notice that the length of the main deck is given as the register length. Was not this the length used in calculating the tonnage? I always understood that the registered length was measured from the fore side of the stem to the after side of the sternpost on the range of the upper deck beams. The drawing shows a booby hatch with curved top at the entrance to the cabin on the poop. This is shown in Rennie's well-known sail plan of the ship, so I presume the erection from there to the break of the poop with a door on each side was added later. There is a slight difference between the panelling on the sides of the deckhouses as shown on the drawing and those on the ship, but perhaps the original panelling was not slavishly copied at the restoration.

Sheet 2 is the rigging and spar plan, and with its wealth of detail is in itself a treatise on ship's rigging. Sizes and material are specified for every rope—using the word rope in its wider sense. Mast and yard fittings are drawn to a  $\frac{1}{4}$  in. scale, and the purpose of every eye is stated. There is no belaying pin plan, but as the lead of all the running gear through the fairleads on the shrouds is given in detail, this will not be greatly missed. A table showing the length and diameter of the masts and spars would have been useful but, curiously enough, this does not seem to be included in any of the ship's plans I have seen. The lengths can of course be scaled quite easily, but the diameters cannot be scaled with the same degree of confidence. Where so much is given, as in these plans, this might have been included.

Sheet 3 is the sail plan, and in it every sail is shown, complete with its gear. The spanker and spencer will be found on Sheet 1 with the details of the lower masts. The rigging of the stunsails is particularly interesting and valuable. In this drawing the lifts for the upper topsail yards appear to be taken from the crosstrees, but in the rigging plan they are shown correctly as coming from

the topmast cap, and in the enlarged detail of the topmast head the eyes for the lifts are shown on each side of the cap. The square sails on the main and fore masts are shown from forward whereas those on the Mizzen are shown from aft—a neat way of overcoming the problem of showing both sides of the sails without undue repetition.

Throughout the set of drawings the colouring of the various parts is indicated, and the copious notes on the drawings make clear any point not easily explained otherwise. Although there are very few model-makers with the ability, the leisure, or the perseverance to make a model incorporating all the details shown in the drawings, it is useful to have all the information at hand. The difficulty would be to decide what to include and what to omit, and such a decision would require a lot of careful thought on the part of even the most experienced ship modeller. The drawings will be of the greatest value to the student of ships, and anyone interested in the clipper ships will find them most fascinating.

In conclusion I consider this to be the most complete and accurate set of drawings of a particular sailing ship produced so far, and Mr Campbell is to be congratulated on his work. They may be purchased on the ship at Greenwich, or may be ordered by post from Mr G. F. Campbell, 13, Warwick Road, Whitstable, Kent, the price being 30s. plus postage.

E. BOWNESS

**THE BOMBAY DOCKYARD AND THE WADIA MASTER BUILDERS.** By R. A. WADIA. (2nd edition.) Published by R. A. Wadia, Thakur Nivas, Jamsetji Tata Road (Bombay 1), 1957. Agent in U.K. Norman Kerr, Booksellers, Grange-over-Sands, Lancs. 6 x 9 inches, green-cloth, xix + 435 pages; illustrations, maps, plans, appendices and index. Price in U.K. £2. 2s. od.

This is a book which has long needed writing. Originally planned as a history of the gifted family which for over 150 years provided the Master Builders of Bombay Dockyard, it has emerged as something very much more. The obvious advantages of Bombay over Surat as the H.E.I.C.'s principal maritime base on the west coast of India, though realized by the Company from the first, was not implemented by the construction of a dock until 1734. The connexion of Mr Wadia's family with the Yard begins in 1736 with the arrival in Bombay, from Surat, of Lowjee Nusserwanji Wadia (previously employed under the Head Builder, Surat) and ten carpenters. It ended in 1913 with the retirement of Mr Bomanjee Sorabjee Wadia from the post of Constructor of the Yard. From father to son (or nephew) between these dates the succession is unbroken; and that, not as the result of nepotism, but from sheer merit, as is abundantly shown by the testimonials, both public and private, which are reproduced in this volume. It is a remarkable record.

Besides using such well-known sources as Low's *History of the Indian Navy*; Phipps's *Papers relative to Shipbuilding in India* and *The English Factories in India* series, Mr Wadia has given us the fruit of much patient research into India Office and Bombay Secretariat records, as well as drawing on what must be an extensive collection of family papers. The result is a valuable contribution to the history, not only of the Dockyard and of the Company's Navy and its successors (whose headquarters were in the Yard) but of Bombay itself; for it is scarcely too much to say that the city grew up round the Dockyard.

The book is divided into two Parts. Part I consisted of seven chapters dealing with the acquisition and early settlement of Bombay Island; a review of the art of shipbuilding in India from the earliest times down to 1673; a brief outline of the H.E.I.C.'s Navy and of the subsequent naval services under the Crown; and the development and administration of the Dockyard from its inception down to the present day. As a former Commander of the Yard, your reviewer found this last-named section of particular interest. Captain Sir E. J. Headlam, while Director of the Royal Indian Marine 1922-29, was working on a monograph history of the Yard, which, however, had not been completed by the time of his retirement. Mr Wadia, who makes generous acknow-

ledgement for the permission by Sir Edward to see and make extracts from the MSS. adds in a footnote on p. 17: 'After his retirement when he was approached... for permission to make further use of the MSS. it was stated that it was in the Bombay Navy Office. Unfortunately this MSS. has not been traced, and all we are left with of his important work are the few extracts taken at that time and which have been incorporated in this work.' Part II deals, in considerable detail, with the history of the shipbuilding activities of the Yard, in many cases following the careers of the ships built, both for the Royal and the Company's navies. Among the former it will suffice to mention such famous names as *Asia*, *Ganges* and *Cornwallis*, the latter of which was only broken up this year. Yet another, the *Trincomalee* (now *Foudroyant*), is still afloat.

There are highly interesting chapters on the rival merits of teak *versus* oak (the accumulated evidence coming down heavily in favour of the former) and the methods of ship construction. The durability of the Bombay-built ships is well known. Among others mentioned in this volume may be cited the case of the *Salsette* frigate, built for the R.N. in 1807. This ship was frozen up in the Baltic in the winter of 1809-10. One of her officers, (later) Captain W. Henderson, was so struck with the soundness of her construction that, when in later years he came to Bombay, he presented the builder, Jamsetjee, with a clock 'for having been', as he said 'the means of saving my life and that of others serving in the ship'. The career of each of the Master Builders in turn is dealt with in this section, together with an account of the ships built by each. But of the many handsome tributes paid to their workmanship it may be doubted whether any was received with greater pleasure than the unsolicited testimonial quoted above. 'If my acquaintance with the English language' wrote the good old man 'had been much more extensive and perfect than it is, I should still be unable to convey to you the pride and gratification I feel at so disinterested and generous a testimony to the utility of my humble endeavours in the particular case you allude to.'

Some useful appendices include complete lists of all vessels built in the Yard between 1736 and 1932, thus collating what has hitherto only been available in scattered records, and amplifying Low. The work is profusely illustrated with reproductions from old prints as well as from modern photographs. There are interesting plans of the Yard showing the developments of 1750, 1803 and 1858 respectively; and in the end pocket what is evidently a chart of Bombay Harbour, but this is unfortunately undated. From internal evidence it appears to relate to a period between 1840 and 1870.

In a work of this kind it is impossible but that some inaccuracies should occur. One learns with great sympathy and regret that, since undertaking his task, Mr Wadia has suffered the affliction of blindness; thus necessitating the services of others in the business of proof-reading and other clerical assistance. This undoubtedly accounts for the numerous misprints. Some of the mistakes no doubt are the result of dictation. One such is to be found on p. 293 where, in quoting Low on the subject of the Marines carried by ships of the Company's Navy, what should read 'Each vessel has a detachment of the Marine Battalion on board' appears as 'each vessel has a detachment of 3 [sic] Marine Battalions on board'. There was only one Marine Battalion in the Company's service. On p. 23 a footnote refers to the 'toredō navatis'. The reference to the map, in a footnote on p. 35, should read 'p. 82' not 'p. 16'. On p. 86, the name of Captain (later R-A) Hewett is misspelt, and on the same page the designations of Captains Gwyn, Goodridge, Hewett, Lumsden and Wilson have been hopelessly confused between R.N.R.I.M. and R.I.M.; as have their appointments. For the sake of clarity it may here be stated that the first four were officers of the R.N. Captain Wilson was R.I.M. and the appointment held by each of them in turn was that of Director of the Royal Indian Marine (not R.I.N.). In this connexion, it is a pity that the brief outline on pp. 20-21 of the Bombay Marine and its successors is spoilt by various inaccuracies in the final paragraph, recording the different titles under which the Service has been known. These titles should read: HEIC's Marine (1612-86), Bombay Marine (1686-1830), Indian Navy (1830-63), Bombay Marine (1863-77), Her Majesty's Indian Marine (1877-92), Royal Indian Marine (1892-1934) and Royal Indian Navy (1934-47). After which date the Service was dissolved and re-emerged as the navies of Pakistan and India respectively. Incidentally, we are presented with the astonishing information (p. 21) that this period (1612 to the present day)

'represents the longest uninterrupted Naval History in the world, longer than that of the Royal Navy'. It all depends I suppose on what you mean by 'uninterrupted' and on what constitutes a Navy. On p. 51 'mole loft' should read 'mould loft'. On p. 96, Sir William Monson, author of *Naval Tracts*, is misspelt 'Manson'; and the mention of 50 tons as the average burthen of ships built in the reign of Charles I should evidently read '500'. A most interesting letter of 1688 (p. 105) suffers from a misplaced full-stop in lines 12-13, what should read 'Then, instead of caske which are ever out of repaire, we here use tanks of great vessels made of good thicke planke' is unintelligible in its present form. The use of the hulk (p. 114) was for 'careening' not 'carrying'. P. 264, line 5, for 'use' read 'rise'. On p. 265, the name and title of the Portuguese Governor General should, I think, read 'Conde Pardes'.

It is in no spirit of carping criticism that your reviewer draws attention to these inaccuracies. Given Mr Wadia's grievous affliction, the necessity of utilizing the services of assistants perhaps less knowledgeable, and certainly less fluent in English, than himself, the difficulty of transcribing faded documents written in difficult hands and with eccentric orthography: all these factors and many others considered make the author's work a remarkable achievement. It is because your reviewer believes that Mr Wadia's work, like that of his forefathers, should be known and valued in other than Indian waters, that he ventures to enumerate these defects which, if corrected in future editions (which it certainly deserves) should make his work a reliable book of reference.

R. D. MERRIMAN

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